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September 19, 2016

Project #: 1009634028.00821110

Ms. Jing Chen
Connecticut Department of Energy & Environmental Protection
79 Elm Street
Hartford, CT 06106

Subject: Semi-Annual Site Status Update
Middletown Generating Station
Middletown, CT

Dear Ms. Chen:

On behalf of Middletown Power LLC, CB&I Environmental & Infrastructure (CB&I) has prepared this letter to provide a semi-annual site status update for the subject site. In addition, CB&I is providing the Connecticut Department of Energy & Environmental Protection (CTDEEP) with a schedule for continuing environmental activities at the site.

AUGUST 2015 THROUGH JANUARY 2016 ACTIVITIES

Environmental field activities completed at the site between August 2015 and January 2016 include groundwater monitoring and Engineered Control (EC) installation and inspections. These activities are discussed below. Other environmental activities completed for the subject site during this reporting period include the following:

- Capping and Environmental Land Use Restriction (ELUR) issues were discussed in a meeting with the CTDEEP in October 2015. The EC will be implemented in SB-2 including the southeast portion of SB-2 (which extends onto Connecticut Department of Transportation (ConnDOT) property) once a final agreement is reached between NRG, ConnDOT, and CTDEEP. The efforts that have been made are documented in the April 11, 2016 letter submitted to CTDEEP and provided in **Attachment 1**. We seek CTDEEP's assistance in working with ConnDOT to close out the site, via use of an ELUR or any other "out of the box" method that meets CTDEEP's goals, as well as NRG and ConnDOT's goals.

- NRG submitted an Alternative and Additional Surface Water Protection Criteria (SWPC) and soil request to CTDEEP on February 2, 2016. Approval was received on February 19, 2016 from CTDEEP for EPH/VPH Methods (I/C DEC, GB PMC, SWPC, and I/C GWVC). Approval was also received for extractable total petroleum hydrocarbons (ETPH), 2-methylnaphthalene, and phenanthrene SWPC values. CTDEEP has not yet issued comments or approval on the remaining constituents of concern (COCs) including arsenic, selenium, and vanadium.

Groundwater Monitoring

CB&I conducted a groundwater sampling event on December 10 and 11, 2015. Groundwater monitoring and sampling was completed at twelve monitoring wells in December 2015. Monitoring well locations are shown on the site plans (**Figures 1** and **2**). A list of the monitoring wells sampled and the analyses conducted is provided in the table below. Laboratory analysis was completed by Accutest Laboratories in Marlboro, Massachusetts. The groundwater sampling event was generally consistent with the monitoring plan provided in EC Part 2 dated November 2010 and the Site-Wide Remedial Action Plan (RAP) dated October 2011.

Location	Laboratory Analysis December 10 and 11, 2015 Groundwater Monitoring Event	
	Metals	EPH with PAHs
TW-10	X	
TW-14	X	
TW-17D	X	
TW-18	X (duplicate)	
TW-21D	X	
AOC01-MW1R	X	
AOC01-MW2	X	
AOC05-MW1		X
AOC02-SB1-MW1	X	
AOC08-SB1-MW1		X (duplicate)
AOC09-SB1-MW1	As only	X
AOC09-SB2-MW2	X	X

Notes:

1. Total Metals including arsenic, lead, selenium, vanadium, and zinc by EPA Method 6010C (Lab Code: SW846 6010C).
2. Extractable petroleum hydrocarbons (EPH) by Massachusetts Department of Environmental Protection (MADEP) method (Lab Code: MADEP EPH Rev. 1.1, SW846 3510C) and polycyclic aromatic hydrocarbons (PAHs) including 2-methlynapthalene by EPA Method 8270 SIM (Lab Code: SW846 8270D by SIM).

During the December 2015 groundwater sampling event, depth to groundwater was measured at each of the monitoring wells using an electronic interface probe (IP) capable of detecting light non-aqueous phase liquid (LNAPL). LNAPL was not detected in monitoring wells gauged during this event. Results of water level monitoring can be found in **Table 1**.

During the December 2015 groundwater monitoring event, CB&I collected groundwater samples from the monitoring wells listed in the above table using a modified low flow sampling technique. No samples were field filtered. Each well was pumped at a rate that produced little drawdown while parameters including temperature, pH, dissolved oxygen, turbidity, and conductivity were monitored. Groundwater samples were then collected after the parameters stabilized to ensure that the groundwater sample was representative of local aquifer conditions. Data sheets documenting field water quality parameter stabilization are provided in **Attachment 2**. Laboratory analysis of each sample is noted in the table above. The complete laboratory analytical report is provided in **Attachment 3.**

The groundwater analytical results from the December 2015 sampling event are summarized in **Table 2.** The groundwater analytical results for the four most recent sampling events, including December 2015, are summarized in **Table 3**. These tables compare the results to applicable criteria for this site, which is classified as groundwater GB. The results of the December 2015 event are generally consistent with the previous several events except for a slightly higher concentration of arsenic and lower concentration of zinc in the groundwater sample collected from well AOC09-SB2-MW2. The plumes continue to be stable. Compounds detected in groundwater samples collected in December 2015 at concentrations greater than their respective SWPC include the following:

- C11-C22 Aromatics was detected in the groundwater sample and in the field duplicate collected from AOC08-SB1-MW1 at 256 µg/L and 205 µg/L, respectively, which are greater than the SWPC of 100 µg/L.
    - Per the Engineered Control, a small low permeability cap was installed around this well to address Total Petroleum Hydrocarbons (TPH) exceeding Pollutant Mobility Criteria (PMC) in soil. Concentrations of Extractable Total Petroleum Hydrocarbons (ETPH) and Extractable Petroleum Hydrocarbons (EPH) in groundwater samples collected from this well, AOC08-SB1-MW1, are in steady state (see attached trend graphs, **Attachment 4**). Also provided in **Attachment 4** are the trend graphs for groundwater in the two wells further downgradient (AOC09-SB2-MW2 and AOC09-SB1-MW1) showing recent compliance.

- Arsenic was detected in the groundwater sample collected from AOC09-SB2-MW2 at 15 µg/L which is greater than the SWPC of 4 µg/L. As noted above, NRG recently submitted for approval an Alternative SWPC for arsenic of 520 µg/L which is still pending.

- Selenium was detected in the groundwater sample collected from TW-17D at 50.3 µg/L which is greater than the SWPC of 50 µg/L. As noted above, NRG recently submitted for approval an Alternative SWPC for arsenic of 10,000 µg/L which is still pending.

- Vanadium was detected in seven (7) of the 10 groundwater samples collected. The maximum concentration of 298 µg/L was detected in the sample collected from TW-17D. There is no established SWPC for vanadium. As noted above, NRG recently submitted for approval an Additional SWPC for vanadium of 10,000 µg/L which is still pending.

Laboratory analysis completed as part of these site activities was requested to be conducted in accordance with CTDEEP's Reasonable Confidence Protocol (RCP). The work completed during this reporting period was performed in general accordance with the site specific Quality Assurance Project Plan (QAPP). CB&I performed a data validation review for the laboratory report. The data validation work sheet is attached to the laboratory report included in **Attachment 3**. The laboratory analysis was completed in accordance with CTDEEP's RCP; however, a few minor quality assurance/quality control

(QA/QC) issues, which are summarized in the validation worksheets and laboratory report narratives, were identified. QA/QC issues noted included:

MC43503

- A trace amount of zinc was detected in the equipment blank. Per validation protocol, the blank concentration is multiplied by 5 to get the action level for qualifying monitoring well sample concentrations. Monitoring well samples with positive results for zinc less than the action level (i.e., 5 times the amount found in the blank) were qualified with a "U" and those greater than the action level were not qualified. The data was useable.

- Trace amounts of naphthalene were detected in the equipment blank and in the OP45788-MB method blank. Per validation protocol, the blank concentration is multiplied by 5 to get the action level for qualifying monitoring well sample concentrations. Associated monitoring well samples with positive results for naphthalene less than the action level (i.e., 5 times the amount found in the blanks) were qualified with a "U" and those greater than the action level were not qualified. The data was useable.

- The relative percent differences (RPDs) for the serial dilution for lead are outside control limits for sample MP25623-SD1. The percent difference is acceptable due to low initial sample concentration (< 50 times instrument detection limit (IDL)). No qualifications are necessary.

A number of sample results for metals were reported at concentrations less than the reporting limit but greater than the method detection limit. Although this is not specifically a QA/QC issue, the results should be considered estimated and are qualified with a "J" unless "U" qualified due to blank contamination. In summary, the qualifications applied to the results had no overall effect on the conclusions drawn from the data, and the data, as qualified, is acceptable for the purpose of this submittal.

Construction of Site-Wide EC

Construction of the site-wide EC was conducted by H. E. Butler Construction Company (Butler) between August and September 2015. The work conducted during this reporting period included light re-grading of the EB-2 area and the area between EB-2 and SB-1. It also included topsoil placement and hydroseeding between EB-2 and SB-1 which was completed on September 17, 2015. Sufficient grass was established per the specification in fall of 2015 as identified in NRG's email dated November, 24, 2016. Stone EC and slope protection was placed on approximately 350 linear feet of slope north of the EB-2 area. Progress as-built drawings are provided in **Attachment 5.** NRG performed oversight of the contractor during construction.

The EC completed during this reporting period generally meets specifications approved in the October 2011 RAP. The final review has not yet been completed by the site LEP and Professional Engineer.

EC construction on SB-2 continues to be delayed in order to finalize the details of the access agreement with ConnDOT relative to RSR regulatory requirements. EC completion will be documented in a subsequent combined status report and EC Completion Report.

EC Inspections

As stated in Section 6.0 of the CTDEEP-approved EC, routine inspections of the EC installed to date begin one month after completion and are performed quarterly for the first year. After the first year, the inspection frequency can be reduced to a semi-annual schedule should the site condition be suitably stable. NRG and CB&I have conducted and completed the above noted required periodic inspections of SB-1 and several areas of stone and pavement cover. These areas are now subject to semi-annual routine inspections. Additional areas of the EC will be inspected as they are completed. As of October 2015, the areas completed during this reporting period are subject to the quarterly 'first year' routine inspections. During this reporting period, NRG conducted a routine EC inspection on November 10, 2015. A modified version of Table 1 of the EC Part 2, the Engineered Control Inspection Checklist, was completed to document the inspections (**Attachment 6**). Andrew Walker, Licensed Site Professional (LSP), and Paul Farrington Connecticut Professional Engineer (CT PE), both of CB&I, visited the site on September 15, 2015 to test and verify thickness of topsoil in the area between SB-1 and the fence at the water treatment plant. Thickness of topsoil in place was generally satisfactory with minor modifications required.

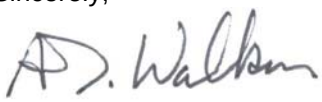
SITE SCHEDULE

Outlined below is an estimated site schedule that Middletown Power LLC expects to follow in the next two years.

Activity	Anticipated Date
Continued Groundwater Monitoring	Q3 2016, Q1 2017
RAP Complete (i.e., SB-2 cap construction complete)	Q4 2017
RAP Completion Report (includes Engineered Control Completion Report)	Q1 2018
Post Remediation Monitoring	On-going

NRG will continue to provide updates on the status of response actions at the subject site on a semi-annual basis as requested by CTDEEP. Plans, submittals, and reports will be copied to the USEPA. If you have any questions regarding this letter or any other matter, please do not hesitate to call.

Sincerely,



Andrew D. Walker, LEP, LSP
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Enclosures:

Table 1 – Groundwater Gauging Data
Table 2 – Groundwater Analytical Results – Detections December 2015
Table 3 – Groundwater Analytical Results – May 2014 to December 2015

Figure 1 – Site Plan – Western
Figure 2 – Site Plan – Eastern

Attachment 1 – Letter to CTDEEP (April 11, 2016)
Attachment 2 – Field Water Quality Parameter Data Sheets
Attachment 3 – Laboratory Analytical Report and Data Validation
Attachment 4 – Groundwater Concentration versus Time Trend Graphs
Attachment 5 – Progress As-Built Drawings C-3 and C-4 (revised December 2015)
Attachment 6 – Engineered Control Inspection Checklist

cc: Keith Shortsleeve, Middletown Power LLC (hard copy and electronic copy)
Robert Spooner, NRG (electronic copy)
Juan Perez, USEPA (electronic copy)

TABLES

TABLE 1
GROUNDWATER GAUGING DATA
(08/01/2015 - 01/31/2016)

Middletown Power LLC
1866 River Road
Middletown, Connecticut

Location	Date	Reference Elevation (Feet)	Depth to Water (Feet)	Depth to LNAPL (Feet)	LNAPL Thickness (Feet)	Groundwater Elevation (Feet)	Notes
AOC01-MW1R	12/10/2015	33.48	31.05	ND	---	2.43	DTB = 39.45'
AOC01-MW2	12/10/2015	33.70	31.80	ND	---	1.90	DTB = 39.90'
AOC02-SB1-MW1	12/10/2015	27.26	24.83	ND	---	2.43	DTB = 35.75'
AOC05-MW1	12/10/2015	20.61	15.86	ND	---	4.75	DTB = 24.30'
AOC08-SB1-MW1	12/11/2015	24.78	20.08	ND	---	4.70	DTB = 32.03'
AOC09-SB1-MW1	12/11/2015	27.07	24.76	ND	---	2.31	DTB = 34.62'
AOC09-SB2-MW2	12/11/2015	24.21	22.12	ND	---	2.09	DTB = 34.50'
TW-10*	12/10/2015	32.58	26.25	ND	---	6.33	DTB = 44.45'; data not useable
TW-14*	12/10/2015	28.25	29.32	ND	---	-1.07	DTB = 42.71'; data not useable
TW-17D	12/10/2015	34.17	31.41	ND	---	2.76	DTB = 39.78'
TW-18	12/10/2015	36.46	34.09	ND	---	2.37	DTB = 41.15'
TW-21D	12/10/2015	34.19	31.26	ND	---	2.93	DTB = 41.10'

Notes: NA = Not Available
--- = Not Applicable
ND = Not Detected
DTB = Depth to Bottom
Elevations relative to NGVD29
*TW-10 and TW-14 12/10/2015 measurements considered not useable.

Table 2
Groundwater Analytical Results - Detections December 2015
Middletown Power LLC, Middletown, CT

CONSTITUENT	SWPC	AOC01-MW1R 12/10/2015 Primary	AOC01-MW2 12/10/2015 Primary	AOC02-SB1-MW1 12/10/2015 Primary	AOC05-MW1 12/10/2015 Primary	AOC08-SB1-MW1 12/11/2015 Primary	AOC08-SB1-MW1 12/11/2015 Duplicate 1	AOC09-SB1-MW1 12/11/2015 Primary	AOC09-SB2-MW2 12/11/2015 Primary	TW-10 12/10/2015 Primary
SVOCs (ug/L)										
Acenaphthene	NE	---	---	---	<0.014	1.6	1.4	<0.014	0.16JJ	---
Acenaphthylene	0.3	---	---	---	<0.016	0.27	0.23	<0.016	<0.016	---
Anthracene	1100000	---	---	---	<0.018	<0.018	<0.018	<0.018	0.043JJ	---
Fluoranthene	3700	---	---	---	<0.014	0.029JJ	<0.014	<0.014	0.036JJ	---
Fluorene	140000	---	---	---	<0.028	3.2	3.4	<0.028	0.082JJ	---
Phenanthrene	14	---	---	---	<0.020	1.2	1.5	<0.020	<0.020	---
Pyrene	110000	---	---	---	<0.016	0.078JJ	0.057JJ	<0.016	0.033JJ	---
EPH (ug/L)										
C9-C18 Aliphatics (FID)	770	---	---	---	<66	80.7JJ	69.1JJ	<66	<66	---
C11-C22 Aromatics	100	---	---	---	<66	{256}	{205}	<66	<66	---
Metals (ug/L)										
Arsenic	4	<1.7	1.7BJ	<1.7	---	---	---	1.7BJ	{15.0}	<1.7
Selenium	50	8.0BJ	<2.0	<2.0	---	---	---	---	<2.0	<2.0
Vanadium	NE	1.3BJ	<0.51	<0.51	---	---	---	---	<0.51	5.0BJ
Zinc	123	<3.8BU	<1.1BU	<1.6BU	---	---	---	---	15.8BJ	<5.5BU

Notes:
SWPC = Connecticut Surface Water Protection Criteria and site specific alternative and additional criteria where applicable.
SWPC for aliphatic and aromatic hydrocarbon ranges from February 2016 CTDEEP Request for Approval
for Use of EPH/VPH/APH Methods and Associated Criteria.
The SWPC for acenaphthene is 150 ug/L per CTDEEP standard form FASTAPS dated 12/10/2015.
--- = Constituent not analyzed for
NE = Not establisehd
ug/L = micrograms per liter
{Highlighed} exceeds SWPC criteria
J = Estimated value, lab and/or validation qualifier
U = Below detection limit as deteremined by validator
B = Estimated value, lab qualifier (inorganics).

Table 2
Groundwater Analytical Results - Detections December 2015
Middletown Power LLC, Middletown, CT

CONSTITUENT	SWPC	TW-14 12/10/2015 Primary	TW-17D 12/10/2015 Primary	TW-18 12/10/2015 Primary	TW-18 12/10/2015 Duplicate 1	TW-21D 12/10/2015 Primary
SVOCs (ug/L)						
Acenaphthene	NE	---	---	---	---	---
Acenaphthylene	0.3	---	---	---	---	---
Anthracene	1100000	---	---	---	---	---
Fluoranthene	3700	---	---	---	---	---
Fluorene	140000	---	---	---	---	---
Phenanthrene	14	---	---	---	---	---
Pyrene	110000	---	---	---	---	---
EPH (ug/L)						
C9-C18 Aliphatics (FID)	770	---	---	---	---	---
C11-C22 Aromatics	100	---	---	---	---	---
Metals (ug/L)						
Arsenic	4	<1.7	<1.7	<1.7	<1.7	<1.7
Selenium	50	<2.0	{50.3}	<2.0	<2.0	35.9
Vanadium	NE	2.2BJ	298	11	11.1	6.8BJ
Zinc	123	<2.4BU	<3.6BU	<1.8BU	<1.6BU	<3.0BU

Notes:
SWPC = Connecticut Surface Water Protection Criteria and site specific alternative and additional criteria where applicable.
SWPC for aliphatic and aromatic hydrocarbon ranges from February 2016 CTDEEP Request for Approval
for Use of EPH/VPH/APH Methods and Associated Criteria.
The SWPC for acenaphthene is 150 ug/L per CTDEEP standard form FASTAPS dated 12/10/2015.
--- = Constituent not analyzed for
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ug/L = micrograms per liter
{Highlighed} exceeds SWPC criteria
J = Estimated value, lab and/or validation qualifier
U = Below detection limit as deteremined by validator
B = Estimated value, lab qualifier (inorganics).

Table 3
Groundwater Analytical Results - May 2014 through December 2015
Middletown Power LLC, Middletown, CT

CONSTITUENT	SWPC	AOC01-MW1R 5/6/2014 Primary	AOC01-MW1R 9/19/2014 Primary	AOC01-MW1R 5/20/2015 Primary	AOC01-MW1R 12/10/2015 Primary	AOC01-MW2 5/6/2014 Primary	AOC01-MW2 9/19/2014 Primary	AOC01-MW2 5/20/2015 Primary	AOC01-MW2 12/10/2015 Primary	AOC02-SB1-MW1 5/5/2014 Primary
SVOCs (ug/L)										
2-Methylnaphthalene	62	---	---	---	---	---	---	---	---	---
Acenaphthene	NE	---	---	---	---	---	---	---	---	---
Acenaphthylene	0.3	---	---	---	---	---	---	---	---	---
Anthracene	1100000	---	---	---	---	---	---	---	---	---
Benzo(a)anthracene	0.3	---	---	---	---	---	---	---	---	---
Benzo(a)pyrene	0.3	---	---	---	---	---	---	---	---	---
Benzo(b)fluoranthene	0.3	---	---	---	---	---	---	---	---	---
Benzo(ghi)perylene	NE	---	---	---	---	---	---	---	---	---
Benzo(k)fluoranthene	0.3	---	---	---	---	---	---	---	---	---
Chrysene	NE	---	---	---	---	---	---	---	---	---
Dibenzo(a,h)anthracene	NE	---	---	---	---	---	---	---	---	---
Fluoranthene	3700	---	---	---	---	---	---	---	---	---
Fluorene	140000	---	---	---	---	---	---	---	---	---
Indeno(1,2,3-cd)pyrene	NE	---	---	---	---	---	---	---	---	---
Naphthalene	NE	---	---	---	---	---	---	---	---	---
Phenanthrene	14	---	---	---	---	---	---	---	---	---
Pyrene	110000	---	---	---	---	---	---	---	---	---
EPH (ug/L)										
C9-C18 Aliphatics (FID)	770	---	---	---	---	---	---	---	---	---
C19-C36 Aliphatics (FID)	530	---	---	---	---	---	---	---	---	---
C11-C22 Aromatics	100	---	---	---	---	---	---	---	---	---
Metals (ug/L)										
Arsenic	4	<2.9	<2.4	<1.7	<1.7	<2.9	<2.4	<1.7	1.7BJ	<2.9
Lead	13	<1.7	<1.9	<1.7	<1.7	<1.7	<1.9	<1.7	<1.7	<1.7
Selenium	50	27	{52.6}	29.3	8.0BJ	<4.8	<2.7	<2.0	<2.0	<4.8
Vanadium	NE	<2.8	6.1BJ	<0.51	1.3BJ	<2.8	2.1BJ	1.2BJ	<0.51	<2.8
Zinc	123	<5.3BU	6.5BJ	<6.5BU	<3.8BU	65.1	7.0BJ	<8.2B	<1.1B	<6.8BU

Notes:
SWPC = Connecticut Surface Water Protection Criteria and site specific alternative and additional criteria where applicable.
SWPC for aliphatic and aromatic hydrocarbon ranges from February 2016 CTDEEP Request for Approval
for Use of EPH/VPH/APH Methods and Associated Criteria.
--- = Constituent not analyzed for.
NE = Not established
ug/L = micrograms per liter
{Highlighted} exceeds SWPC criteria
B = Estimated value (inorganics) or constituent detected in associated method blank (organics), lab qualifier
J = Estimated value, lab and/or validation qualifier
U = Below detection limit as determined by validator

Table 3
Groundwater Analytical Results - May 2014 through December 2015
Middletown Power LLC, Middletown, CT

CONSTITUENT	SWPC	AOC02-SB1-MW1 9/19/2014 Primary	AOC02-SB1-MW1 5/21/2015 Primary	AOC02-SB1-MW1 12/10/2015 Primary	AOC05-MW1 5/5/2014 Primary	AOC05-MW1 9/18/2014 Primary	AOC05-MW1 5/20/2015 Primary	AOC05-MW1 12/10/2015 Primary	AOC08-SB1-MW1 5/6/2014 Primary
SVOCs (ug/L)									
2-Methylnaphthalene	62	---	---	---	<0.075	1.4	<0.011	<0.021	<0.075
Acenaphthene	NE	---	---	---	<0.070	<0.14	<0.0076	<0.014	0.1
Acenaphthylene	0.3	---	---	---	<0.050	<0.099	<0.0085	<0.016	<0.050
Anthracene	1100000	---	---	---	<0.093	<0.18	<0.0099	<0.018	<0.093
Benzo(a)anthracene	0.3	---	---	---	<0.020	<0.039	<0.024	<0.044	<0.020
Benzo(a)pyrene	0.3	---	---	---	<0.029	<0.057	<0.015	<0.029	<0.029
Benzo(b)fluoranthene	0.3	---	---	---	<0.032	<0.063	<0.019	<0.036	<0.032
Benzo(ghi)perylene	NE	---	---	---	<0.027	<0.054	<0.013	<0.023	<0.027
Benzo(k)fluoranthene	0.3	---	---	---	<0.039	<0.077	<0.010	<0.019	<0.039
Chrysene	NE	---	---	---	<0.024	<0.048	<0.013	<0.025	<0.024
Dibenzo(a,h)anthracene	NE	---	---	---	<0.032	<0.064	<0.015	<0.028	<0.032
Fluoranthene	3700	---	---	---	<0.041	<0.081	<0.0075	<0.014	<0.041
Fluorene	140000	---	---	---	<0.10	<0.20	<0.015	<0.028	<0.10
Indeno(1,2,3-cd)pyrene	NE	---	---	---	<0.031	<0.061	<0.021	<0.038	<0.031
Naphthalene	NE	---	---	---	<0.042	<1.4B	<0.0082	<0.14JB	<0.042
Phenanthrene	14	---	---	---	<0.013	<0.23	<0.011	<0.020	<0.013
Pyrene	110000	---	---	---	<0.039	<0.077	<0.0086	<0.016	<0.039
EPH (ug/L)									
C9-C18 Aliphatics (FID)	770	---	---	---	<100	<100	<70J	<66	<100
C19-C36 Aliphatics (FID)	530	---	---	---	<100	<100	<70	<66	109
C11-C22 Aromatics	100	---	---	---	<100	<100	<70	<66	{287}
Metals (ug/L)									
Arsenic	4	<2.4	<1.7	<1.7	---	---	---	---	---
Lead	13	<1.9	<1.7	<1.7	---	---	---	---	---
Selenium	50	<2.7	<2.0	<2.0	---	---	---	---	---
Vanadium	NE	0.90BJ	0.90BJ	<0.51	---	---	---	---	---
Zinc	123	8.3BJ	<9.5BU	<1.6BU	---	---	---	---	---

Notes:
SWPC = Connecticut Surface Water Protection Criteria and site specific alternative and additional criteria where applicable.
SWPC for aliphatic and aromatic hydrocarbon ranges from February 2016 CTDEEP Request for Approval
for Use of EPH/VPH/APH Methods and Associated Criteria.
--- = Constituent not analyzed for.
NE = Not established
ug/L = micrograms per liter
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B = Estimated value (inorganics) or constituent detected in associated method blank (organics), lab qualifier
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U = Below detection limit as determined by validator

Table 3
Groundwater Analytical Results - May 2014 through December 2015
Middletown Power LLC, Middletown, CT

CONSTITUENT	SWPC	AOC08-SB1-MW1 5/6/2014 Duplicate 1	AOC08-SB1-MW1 9/18/2014 Primary	AOC08-SB1-MW1 9/18/2014 Duplicate 1	AOC08-SB1-MW1 5/21/2015 Primary	AOC08-SB1-MW1 5/21/2015 Duplicate 1	AOC08-SB1-MW1 12/11/2015 Primary	AOC08-SB1-MW1 12/11/2015 Duplicate 1	AOC09-SB1-MW1 5/5/2014 Primary
SVOCs (ug/L)									
2-Methylnaphthalene	62	---	<0.25	<0.25	<0.011	<0.011	<0.021	<0.021	<0.075
Acenaphthene	NE	<0.14	1.2	1.2	0.44	0.5	1.6	1.4	<0.070
Acenaphthylene	0.3	<0.10	0.22	0.23	0.037JJ	0.064JJ	0.27	0.23	<0.050
Anthracene	1100000	<0.19	<0.18	<0.18	<0.0098	0.042JJ	<0.018	<0.018	<0.093
Benzo(a)anthracene	0.3	<0.040	<0.039	<0.039	<0.024	<0.024	<0.045	<0.044	<0.020
Benzo(a)pyrene	0.3	<0.059	<0.057	<0.057	<0.015	<0.015	<0.029	<0.029	<0.029
Benzo(b)fluoranthene	0.3	<0.064	<0.063	<0.063	<0.019	<0.019	<0.036	<0.036	<0.032
Benzo(ghi)perylene	NE	<0.055	<0.054	<0.054	<0.013	<0.013	<0.024	<0.023	<0.027
Benzo(k)fluoranthene	0.3	<0.079	<0.077	<0.077	<0.010	<0.010	<0.019	<0.019	<0.039
Chrysene	NE	<0.049	<0.048	<0.048	<0.013	<0.013	<0.025	<0.025	<0.024
Dibenzo(a,h)anthracene	NE	<0.065	<0.064	<0.064	<0.015	<0.015	<0.028	<0.028	<0.032
Fluoranthene	3700	<0.083	<0.081	<0.081	<0.0074	<0.0074	0.029JJ	<0.014	<0.041
Fluorene	140000	<0.20	2.1	2	0.6	0.87	3.2	3.4	<0.10
Indeno(1,2,3-cd)pyrene	NE	<0.062	<0.061	<0.061	<0.020	<0.020	<0.038	<0.038	<0.031
Naphthalene	NE	<0.23B	<1.6	<1.2B	<0.0081	<0.0081	<0.42JB	<0.30JB	<0.042
Phenanthrene	14	<0.033JB	0.91	0.88	<0.011	0.089	1.2	1.5	<0.013
Pyrene	110000	<0.078	0.093JJ	0.099JJ	0.024JJ	0.042JJ	0.078JJ	0.057JJ	<0.039
EPH (ug/L)									
C9-C18 Aliphatics (FID)	770	143	202J	251	<70J	<70J	80.7JJ	69.1JJ	<100
C19-C36 Aliphatics (FID)	530	134	209J	197	<70	<70	<66	<66	<100
C11-C22 Aromatics	100	{461}	{282}J	{313}	{154}	{196}	{256}	{205}	<100
Metals (ug/L)									
Arsenic	4	---	---	---	---	---	---	---	<2.9
Lead	13	---	---	---	---	---	---	---	---
Selenium	50	---	---	---	---	---	---	---	---
Vanadium	NE	---	---	---	---	---	---	---	---
Zinc	123	---	---	---	---	---	---	---	---

Notes:
SWPC = Connecticut Surface Water Protection Criteria and site specific alternative and additional criteria where applicable.
SWPC for aliphatic and aromatic hydrocarbon ranges from February 2016 CTDEEP Request for Approval
for Use of EPH/VPH/APH Methods and Associated Criteria.
--- = Constituent not analyzed for.
NE = Not established
ug/L = micrograms per liter
{Highlighted} exceeds SWPC criteria
B = Estimated value (inorganics) or constituent detected in associated method blank (organics), lab qualifier
J = Estimated value, lab and/or validation qualifier
U = Below detection limit as determined by validator

Table 3
Groundwater Analytical Results - May 2014 through December 2015
Middletown Power LLC, Middletown, CT

CONSTITUENT	SWPC	AOC09-SB1-MW1 9/18/2014 Primary	AOC09-SB1-MW1 5/21/2015 Primary	AOC09-SB1-MW1 12/11/2015 Primary	AOC09-SB2-MW2 5/5/2014 Primary	AOC09-SB2-MW2 5/5/2014 Duplicate 1	AOC09-SB2-MW2 9/18/2014 Primary	AOC09-SB2-MW2 5/21/2015 Primary	AOC09-SB2-MW2 12/11/2015 Primary
SVOCs (ug/L)									
2-Methylnaphthalene	62	1	<0.011	<0.021	<0.075	<0.075	0.53	<0.011	<0.021
Acenaphthene	NE	<0.14	<0.0075	<0.014	0.096JJ	0.12	<0.14	0.21	0.16JJ
Acenaphthylene	0.3	<0.099	<0.0084	<0.016	<0.050	<0.050	<0.099	0.022JJ	<0.016
Anthracene	1100000	<0.18	<0.0098	<0.018	<0.093	<0.093	<0.18	<0.0098	0.043JJ
Benzo(a)anthracene	0.3	<0.039	<0.024	<0.044	<0.020	<0.020	<0.039	<0.024	<0.044
Benzo(a)pyrene	0.3	<0.057	<0.015	<0.029	<0.029	<0.029	<0.057	<0.015	<0.029
Benzo(b)fluoranthene	0.3	<0.063	<0.019	<0.036	<0.032	<0.032	<0.063	<0.019	<0.036
Benzo(ghi)perylene	NE	<0.054	<0.013	<0.023	<0.027	<0.027	<0.054	<0.013	<0.023
Benzo(k)fluoranthene	0.3	<0.077	<0.010	<0.019	<0.039	<0.039	<0.077	<0.010	<0.019
Chrysene	NE	<0.048	<0.013	<0.025	<0.024	<0.024	<0.048	<0.013	<0.025
Dibenzo(a,h)anthracene	NE	<0.064	<0.015	<0.028	<0.032	<0.032	<0.064	<0.015	<0.028
Fluoranthene	3700	<0.081	<0.0074	<0.014	<0.041	<0.041	<0.081	0.015JJ	0.036JJ
Fluorene	140000	<0.20	<0.015	<0.028	0.16	0.22	<0.20	0.16	0.082JJ
Indeno(1,2,3-cd)pyrene	NE	<0.061	<0.020	<0.038	<0.031	<0.031	<0.061	<0.020	<0.038
Naphthalene	NE	<1.5	<0.0081	<0.13JB	<0.057J	<0.054J	<1.0B	<0.0081	<0.14JB
Phenanthrene	14	<0.089J	<0.011	<0.020	<0.019JB	<0.013	<0.062J	<0.011	<0.020
Pyrene	110000	<0.077	<0.0085	<0.016	<0.039	<0.039	<0.077	<0.0085	0.033JJ
EPH (ug/L)									
C9-C18 Aliphatics (FID)	770	<100	<70J	<66	<100	---	<100J	<70J	<66
C19-C36 Aliphatics (FID)	530	<100	<70	<66	<100	---	<100J	<70	<66
C11-C22 Aromatics	100	<100	<70	<66	{150}	---	<100J	{137}	<66
Metals (ug/L)									
Arsenic	4	<2.4	<1.7	1.7BJ	<2.9	---	3.5BJ	{7.6}	{15.0}
Lead	13	---	---	---	<1.7	---	<1.9	<1.7	<1.7
Selenium	50	---	---	---	<4.8	---	<2.7	<2.0	<2.0
Vanadium	NE	---	---	---	<2.8	---	<0.72	<0.51	<0.51
Zinc	123	---	---	---	81.4	---	91.1	69.6	15.8B

Notes:
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{Highlighted} exceeds SWPC criteria
B = Estimated value (inorganics) or constituent detected in associated method blank (organics), lab qualifier
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Table 3
Groundwater Analytical Results - May 2014 through December 2015
Middletown Power LLC, Middletown, CT

CONSTITUENT	SWPC	TW-10 5/6/2014 Primary	TW-10 9/19/2014 Primary	TW-10 5/20/2015 Primary	TW-10 12/10/2015 Primary	TW-14 5/6/2014 Primary	TW-14 9/19/2014 Primary	TW-14 5/20/2015 Primary	TW-14 12/10/2015 Primary	TW-17D 5/5/2014 Primary	TW-17D 9/18/2014 Primary	TW-17D 5/20/2015 Primary	TW-17D 12/10/2015 Primary
SVOCs (ug/L)													
2-Methylnaphthalene	62	---	---	---	---	---	---	---	---	---	---	---	---
Acenaphthene	NE	---	---	---	---	---	---	---	---	---	---	---	---
Acenaphthylene	0.3	---	---	---	---	---	---	---	---	---	---	---	---
Anthracene	1100000	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(a)anthracene	0.3	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(a)pyrene	0.3	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(b)fluoranthene	0.3	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(ghi)perylene	NE	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(k)fluoranthene	0.3	---	---	---	---	---	---	---	---	---	---	---	---
Chrysene	NE	---	---	---	---	---	---	---	---	---	---	---	---
Dibenzo(a,h)anthracene	NE	---	---	---	---	---	---	---	---	---	---	---	---
Fluoranthene	3700	---	---	---	---	---	---	---	---	---	---	---	---
Fluorene	140000	---	---	---	---	---	---	---	---	---	---	---	---
Indeno(1,2,3-cd)pyrene	NE	---	---	---	---	---	---	---	---	---	---	---	---
Naphthalene	NE	---	---	---	---	---	---	---	---	---	---	---	---
Phenanthrene	14	---	---	---	---	---	---	---	---	---	---	---	---
Pyrene	110000	---	---	---	---	---	---	---	---	---	---	---	---
EPH (ug/L)													
C9-C18 Aliphatics (FID)	770	---	---	---	---	---	---	---	---	---	---	---	---
C19-C36 Aliphatics (FID)	530	---	---	---	---	---	---	---	---	---	---	---	---
C11-C22 Aromatics	100	---	---	---	---	---	---	---	---	---	---	---	---
Metals (ug/L)													
Arsenic	4	{4.6}	<2.4	<1.7	<1.7	<2.9	<2.4	<1.7	<1.7	<2.9	<2.4	<1.7	<1.7
Lead	13	<1.7	<1.9	<1.7	<1.7	<1.7	<1.9	<1.7	<1.7	<1.7	<1.9	<1.7	<1.7
Selenium	50	<4.8	2.8BJ	<2.0	<2.0	<4.8	<2.7	<2.0	<2.0	49.1	{54.3}	46.8	{50.3}
Vanadium	NE	7.5BJ	2.4BJ	<0.51	5.0BJ	4.6BJ	6.6BJ	2.0BJ	2.2BJ	400	381	471	298
Zinc	123	<5.6BU	8.7BJ	<7.3BU	<5.5BU	<6.8BU	9.7BJ	<14.5BU	<2.4BU	<6.3BU	7.2BJ	<5.5BU	<3.6BU

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Table 3
Groundwater Analytical Results - May 2014 through December 2015
Middletown Power LLC, Middletown, CT

CONSTITUENT	SWPC	TW-18 5/6/2014 Primary	TW-18 5/6/2014 Duplicate 1	TW-18 9/18/2014 Primary	TW-18 9/18/2014 Duplicate 1	TW-18 5/20/2015 Primary	TW-18 5/20/2015 Duplicate 1	TW-18 12/10/2015 Primary	TW-18 12/10/2015 Duplicate 1	TW-21D 5/6/2014 Primary	TW-21D 9/18/2014 Primary	TW-21D 5/20/2015 Primary	TW-21D 12/10/2015 Primary
SVOCs (ug/L)													
2-Methylnaphthalene	62	---	---	---	---	---	---	---	---	---	---	---	---
Acenaphthene	NE	---	---	---	---	---	---	---	---	---	---	---	---
Acenaphthylene	0.3	---	---	---	---	---	---	---	---	---	---	---	---
Anthracene	1100000	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(a)anthracene	0.3	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(a)pyrene	0.3	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(b)fluoranthene	0.3	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(ghi)perylene	NE	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(k)fluoranthene	0.3	---	---	---	---	---	---	---	---	---	---	---	---
Chrysene	NE	---	---	---	---	---	---	---	---	---	---	---	---
Dibenzo(a,h)anthracene	NE	---	---	---	---	---	---	---	---	---	---	---	---
Fluoranthene	3700	---	---	---	---	---	---	---	---	---	---	---	---
Fluorene	140000	---	---	---	---	---	---	---	---	---	---	---	---
Indeno(1,2,3-cd)pyrene	NE	---	---	---	---	---	---	---	---	---	---	---	---
Naphthalene	NE	---	---	---	---	---	---	---	---	---	---	---	---
Phenanthrene	14	---	---	---	---	---	---	---	---	---	---	---	---
Pyrene	110000	---	---	---	---	---	---	---	---	---	---	---	---
EPH (ug/L)													
C9-C18 Aliphatics (FID)	770	---	---	---	---	---	---	---	---	---	---	---	---
C19-C36 Aliphatics (FID)	530	---	---	---	---	---	---	---	---	---	---	---	---
C11-C22 Aromatics	100	---	---	---	---	---	---	---	---	---	---	---	---
Metals (ug/L)													
Arsenic	4	{11.0}	{12.5}	<2.4	<2.4	2.0BJ	1.9BJ	<1.7	<1.7	<2.9	<2.4	<1.7	<1.7
Lead	13	2.9BJ	2.9BJ	<1.9	<1.9	<1.7	<1.7	<1.7	<1.7	<1.7	<1.9	<1.7	<1.7
Selenium	50	{53.7}	{56.7}	<2.7	<2.7	<2.0	<2.0	<2.0	<2.0	32.4	35.5	35	35.9
Vanadium	NE	161	167	16.1	16	12.9	12.5	11	11.1	<2.8	8.3BJ	7.1BJ	6.8BJ
Zinc	123	<6.0BU	<5.7BU	6.5BJ	12.9BJ	<7.0BU	<7.0BU	<1.8BU	<1.6BU	<5.4BU	6.9BJ	5.2B	<3.0BU

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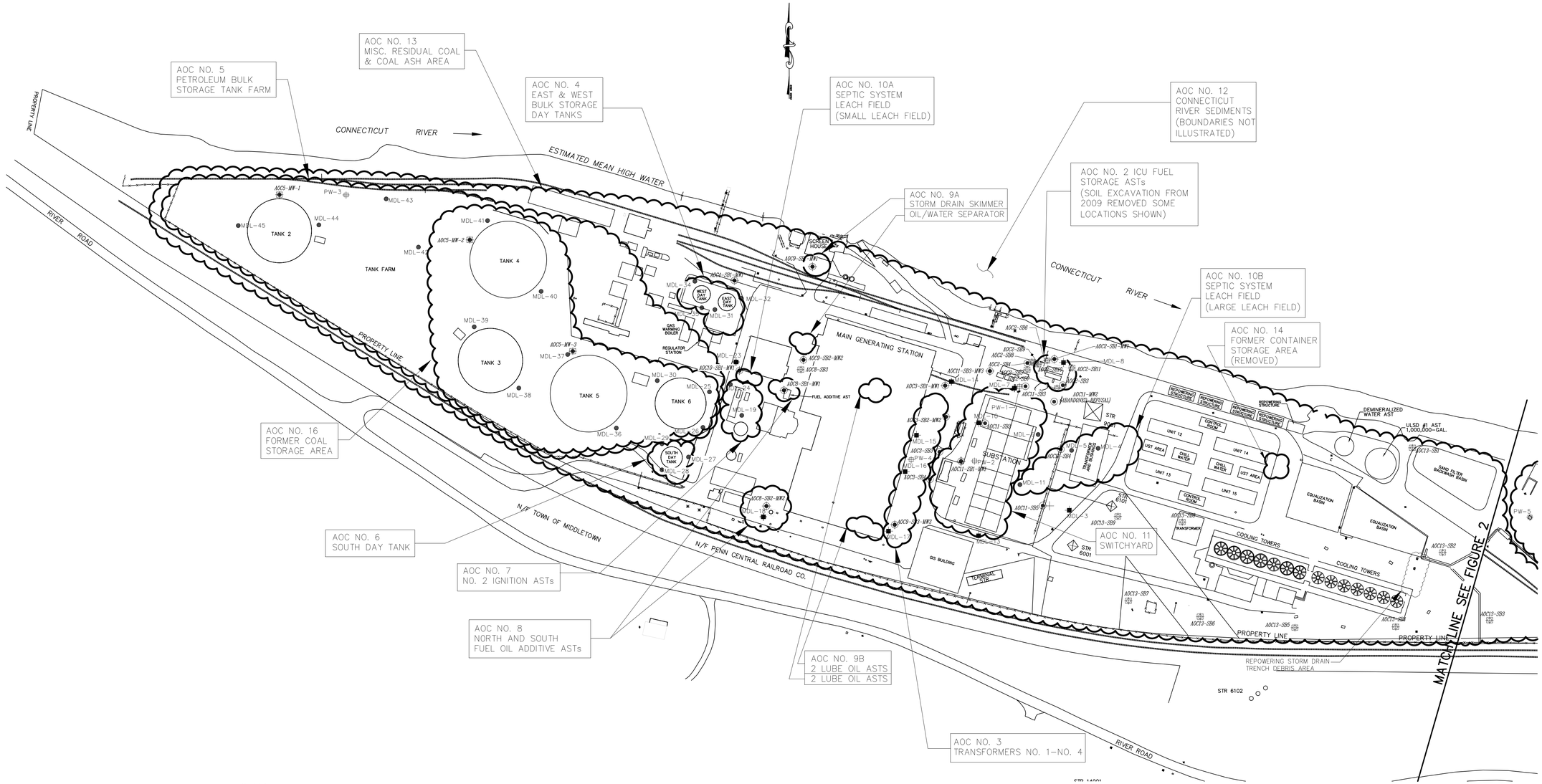
J = Estimated value, lab and/or validation qualifier
U = Below detection limit as determined by validator

FIGURES

OFFICE Canton, MA

DRAWING NUMBER 1009634004-01



LEGEND:

- OAP–16, MDL–1, NRG–SB–1 — BORING LOCATIONS FROM PHASE II & SUPPLEMENTAL INVESTIGATION
- TW–14 — EXISTING MONITORING WELL LOCATIONS (RCRA COMPLIANCE MONITORING)
- AOC3–SB9 — LOCATION OF PHASE III SOIL BORINGS
- AOC7–SB–1/MW1 — LOCATION OF PHASE III SOIL BORING/MONITORING WELL
- MDL–13 — PROPOSED SOIL BORING FROM PHASE II INVESTIGATION (PHYSICAL RESTRAINTS OR UNDERGROUND UTILITY INTERFERENCE PREVENTED PLACEMENT OF BORING).
- PW–1 — PRODUCTION WELL
- ME–SED–03 — PHASE II SEDIMENT SAMPLE LOCATION (1999)
- AOC7A–HA4 — SUPPLEMENTAL PHASE III HAND AUGER SOIL SAMPLE LOCATION
- AOC1–SB2 — SHAW INSTALLED SOIL BORING
- AOC1–MW1 — SHAW INSTALLED MONITORING WELL
- EXISTING CHAIN LINK FENCE
- APPROXIMATE LIMITS OF AREA OF CONCERN

GRAPHIC SCALE
120' 0 60' 120' 240'
(IN FEET)
1 inch = 120 ft.

NOTES:

1.) "SITE PLAN–NRG MIDDLETOWN GENERATING STATION, MIDDLETOWN, CONNECTICUT", PREPARED BY NAFIS & YOUNG ENGINEERS, INC. LOCATED AT 1355 MIDDLETOWN AVENUE, NORTHFORD, CONNECTICUT. SCALE 1"=40', SHEET NO. 1, DATED NOVEMBER 13, 2003.

2.) "COMPILATION PLAN–MIDDLETOWN GENERATING STATION SEPARATION PLAN SHOWING LAND AND EASEMENT TO BE CONVEYED AND EASEMENT TO BE RESERVED MIDDLETOWN, CONNECTICUT" BY NORTHEAST UTILITIES SERVICE CO. FOR THE CONNECTICUT LIGHT AND POWER COMPANY. SCALE 1"=100', DRAWING NO. 21866 SHEET 1 AND 21866 SHEET 2. DATED 9–15–98.

3.) SEDIMENT SAMPLE LOCATION ME–SED–12 COLLECTED DURING THE PHASE II INVESTIGATION IN 1999 IS LOCATED 200 TO 300 FEET UPSTREAM OF WESTERN PROPERTY BOUNDARY.

4.) WESTERN PORTION OF SITE INCLUDES AOC2, AOC3, AOC4, AOC5, AOC6, AOC7, AOC8, AOC9A, AOC9B, AOC10A, AOC10B, AOC11, AOC13, AOC 14 AND AOC16.

5.) PRODUCTION WELL LOCATIONS FROM NORTHEAST UTILITIES SERVICE COMPANY RCRA "PART B" PLAN DATED MAY 10, 1985.

REFERENCES:

1] "AREAS OF CONCERN–EASTERN PORTION OF SITE" PREPARED BY METCALF & EDDY, DATED AUG. 2004. DWG# CZMID003A.DWG 2] "SAMPLE LOCATION PLAN–EASTERN PORTION OF SITE" PREPARED BY METCALF AND EDDY, DATED AUG. 2004. DWG# CZMID002A.DWG
2] SOIL BORING, MONITORING WELL, TOPOGRAPHIC AND WETLAND DELINEATION SURVEY BY A–PLUS CONSTRUCTION DATED MARCH 3, 2008, DWG: TOPO_SURVEY_030308

CB&I ENVIRONMENTAL & INFRASTRUCTURE, INC.

150 ROYALL STREET
CANTON, MASSACHUSETTS
(617) 589-5111

DESIGNED BY: --
DRAWN BY: CD
CHECKED BY: AS
APPROVED BY: AW

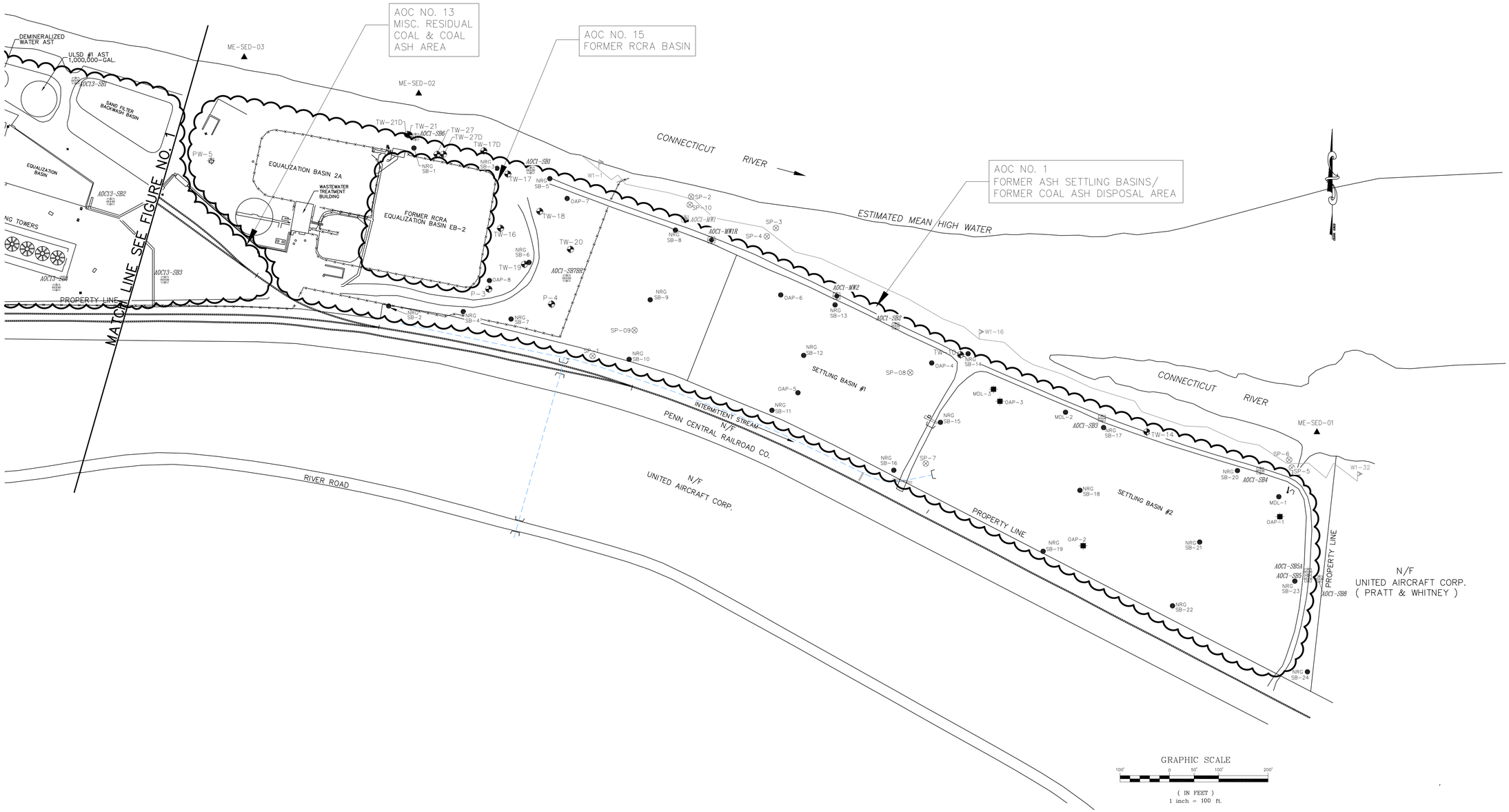
FIGURE 1
SITE PLAN - WESTERN
NRG ENERGY, INC - MIDDLETOWN GENERATING STATION
MIDDLETOWN, CONNECTICUT

DATE:	SCALE:	DRAWING NO.	SHEET NO.
02/18/16	AS SHOWN	1009634004-01	--

VERIFY SCALE 0 1"

File: T:\MISC\N.R.G\Middletown\1009634004-01.dwg Layout: SITEPLAN-A User: chris.desista Mar 29, 2016 - 1:07pm

OFFICE Canton, MA | DRAWING NUMBER 1009634004-01



LEGEND:

OAP-6, MDL-1, NRG-SB-1	BORING LOCATIONS FROM PHASE II & SUPPLEMENTAL INVESTIGATION
TW-14	EXISTING MONITORING WELL LOCATIONS (RCRA COMPLIANCE MONITORING)
AOC3-SB9	LOCATION OF PHASE III SOIL BORINGS
AOC7-SB-1/MW1	LOCATION OF PHASE III SOIL BORING/MONITORING WELL
ME-SED-03	PHASE II SEDIMENT SAMPLE LOCATION
AOC7A-HA4	SUPPLEMENTAL PHASE III HAND AUGER SOIL SAMPLE LOCATION
MDL-1/OAP-3	PROPOSED SOIL BORING FROM PHASE II INVESTIGATION (PHYSICAL RESTRAINTS OR UNDERGROUND UTILITY INFERENCE PREVENTED PLACEMENT OF BORING).
PW-5	PRODUCTION WELL
AOC1-SB2	SHAW INSTALLED SOIL BORING
AOC1-MW1R	SHAW INSTALLED MONITORING WELL
AOC1-MW1	WELL REPLACED
SP-1	WETLAND SAMPLE POINT
W1-1	WETLAND POINT
	INTERMITTENT STREAM
	EXISTING CHAIN LINK FENCE
	WETLAND DELINEATION LINE
	APPROXIMATE LIMITS OF AREA OF CONCERN

NOTES:

1.) "SITE PLAN-NRG MIDDLETOWN GENERATING STATION, MIDDLETOWN, CONNECTICUT", PREPARED BY NAFIS & YOUNG ENGINEERS, INC. LOCATED AT 1355 MIDDLETOWN AVENUE, NORTHFORD, CONNECTICUT. SCALE 1"=40', SHEET NO. 1, DATED NOVEMBER 13, 2003.

2.) "COMPILATION PLAN-MIDDLETOWN GENERATING STATION SEPARATION PLAN SHOWING LAND AND EASEMENT TO BE CONVEYED AND EASEMENT TO BE RESERVED MIDDLETOWN, CONNECTICUT" BY NORTHEAST UTILITIES SERVICE CO. FOR THE CONNECTICUT LIGHT AND POWER COMPANY. SCALE 1'=100', DRAWING NO. 21866 SHEET 1 AND 21866 SHEET 2. DATED 9-15-98.

3.) SEDIMENT SAMPLE LOCATION ME-SED-12 COLLECTED DURING THE PHASE II INVESTIGATION IN 1999 IS LOCATED 200 TO 300 FEET UPSTREAM OF WESTERN PROPERTY BOUNDARY.

4.) EASTERN PORTION OF SITE INCLUDES AOC1 AND AOC15.

5.) PRODUCTION WELL LOCATIONS FROM NORTHEAST UTILITYS SERVICE COMPANY RCRA "PART B" PLAN DATED MAY 20, 1985.

REFERENCES:

1] "AREAS OF CONCERN-EASTERN PORTION OF SITE" PREPARED BY METCALF & EDDY. DATED AUG. 2004. DWG# CZMID003A.DWG 2] "SAMPLE LOCATION PLAN-EASTERN PORTION OF SITE" PREPARED BY METCALF AND EDDY. DATED AUG. 2004. DWG# CZMID002A.DWG
2] WETLANDS DELINEATION PERFORMED BY TONY FROONJIAN, WETLAND SCIENTIST, SHAW ENVIRONMENTAL.
3] SOIL BORING, MONITORING WELL, TOPOGRAPHIC, AND WETLAND DELINEATION SURVEY BY A-PLUS CONSTRUCTION DATED MARCH 3, 2008, DWG: TOPO_SURVEY_030308
4] "STOCK PILE VOLUME PLAN" BY A-PLUS CONSTRUCTION DATED OCTOBER, 2008.

CB&I ENVIRONMENTAL & INFRASTRUCTURE, INC.

DESIGNED BY: --	150 ROYALL STREET CANTON, MASSACHUSETTS (617) 589-5111			
DRAWN BY: CD	FIGURE 2 SITE PLAN - EASTERN NRG ENERGY, INC - MIDDLETOWN GENERATING STATION MIDDLETOWN, CONNECTICUT			
CHECKED BY: AS				
APPROVED BY: AW	DATE: 03/23/16	SCALE: AS SHOWN	DRAWING NO. 1009634004-01	SHEET NO. --

VERIFY SCALE 0 1"

File: T:\MISC\N.R.G\Middletown\1009634004-01.dwg Layout: SITEPLAN-B User: chris.desiata Mar 29, 2016 - 1:08pm

ATTACHMENT 1

BRUCE L. MCDERMOTT
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BMCDERMOTT@MURTHALAW.COM

April 11, 2016

Mr. Patrick Bowe
Director
Remediation Division
Bureau of Water Protection & Land Reuse
Department of Energy and Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

Re: NRG Energy, Middletown

Dear Mr. Bowe:

On behalf of NRG Energy and in response to your November 30, 2015 correspondence regarding the request for an alternative method of compliance with the Environmental Land Use Restriction ("ELUR") for an Approved Engineered Control Variance for the Middletown Facility, we write to document the efforts that have been made to record an ELUR on the DOT Parcel and to document why removing the waste from the DOT parcel is not a viable option. In addition, we seek your assistance in working with DOT to close out NRG's Middletown Transfer Act site, via use of an ELUR or any other "out of the box" method that meets DEEP's goals, as well as NRG and DOT's goals.

We understand from our meeting in October that the Commissioners of DEEP and DOT meet on a monthly basis and we would like to request that the agencies broach the topic of the ELUR during the next meeting. Finishing this site is as much a priority to NRG as it is to DEEP and any means by which DEEP can assist in reaching this goal would be appreciated.

ELUR

Historically, DOT had expressed a willingness to execute an ELUR for the strip of property. In May of 2013, we, on behalf of NRG, reached out to DOT to discuss access to the site, as well as how to coordinate the ELUR. An appraiser, who was an approved

appraiser for DOT, was retained to appraise the subject strip of land. The appraiser reported that the value of the strip was approximately $40,000, having been reduced by $110,000 due to the presence of historic contamination. As a result, DOT offered to execute the ELUR in exchange for $110,000. NRG disputed the figure on the grounds that contamination, rather the cap or the ELUR, caused the loss in value. Thus, the cap and ELUR would resolve contamination issues in accordance with state law and generally restore the value of the property. DOT disputed the method utilized by the appraiser and subsequently took a firm stance against any ELUR on the strip.

Despite DOT's initial willingness to execute an ELUR, since DOT determined that it would not execute an ELUR, it has highlighted two key concerns:

- *Setting a precedent for executing ELURs.*

  With significant stretches of property throughout the State of Connecticut, DOT has concerns over setting a precedent in executing this ELUR. The key concern is managing a multitude of ELURs within its property if other entities began approaching DOT to execute ELURs on other pieces of DOT's property. NRG responded to the concern by reaffirming its intention of assuming responsibility for actively monitoring within the quarter-acre strip of land.

- *Functional Value.*

  DOT has expressed concern over their ability to utilize the property as planned. During a 2013 meeting with DOT, it was noted that there was a relatively high chance that the portion of the railroad that abutted the subject strip would be will be reactivated within 2 years. DOT had concerns that if the railroad is reactivated, the ELUR would prevent ease of access for construction and maintenance in the area, as well as require extra precautions during construction and maintenance workers (i.e. OSHA training for workers).

  While the ELUR may necessitate obtaining a release from DEEP to complete the necessary construction and maintenance for the reason that restriction would abut the "toe of the slope" for the railway, the incremental cost of these burdens, to the extent that they are created as a result of the ELURs, would be borne by NRG. Moreover, a Temporary Conditional Release ("TCR") could be utilized to alleviate some of the burdens for any regularly conducted maintenance that may need to be done if the railroad is activated in that area.

Ultimately, NRG and DOT agreed to resolve the issues with a licensing agreement that would permit NRG access to the DOT strip to install, and perform necessary maintenance of, the engineered control. NRG, via the agreement, would agree to perform the maintenance, as well as absorb any incremental costs incurred by DOT in operating the railroad. DOT also agreed not to disturb the capped area without consulting with NRG, so that NRG may work with DEEP to ensure that the work is done in an approved manner. The intent of the licensing agreement was to satisfy DOT's concerns and avoid a precedent of issuing ELURs, however, mimic the language of the ELUR so that DEEP's goals in instituting ELURs were met.

NRG and DOT agreed to seek DEEP's assistance with crafting the final language of the agreement so that the agreement would adequately mimic an ELUR and allow NRG to verify its property, including the off-site issues. As you recall, upon meeting with DEEP on October 7, 2015, DEEP suggested adding itself as a party to the agreement to provide DEEP with a mechanism by which to enforce the agreement. Unfortunately, DEEP ultimately determined that this mechanism would not adequately address the issues at the site.

As a last effort, NRG approached DOT regarding purchasing the strip of land and providing an easement back to DOT for their continued use. This would provide NRG with the ability to put the easement on the property themselves and allow DOT to continue use of the land without having to manage the ELUR aspect. Unfortunately, DOT is not interested in this concept.

Soil Removal Option

As discussed during the October 7, 2015 meeting at DEEP, removal of the impacted soil for offsite disposal or consolidation back into the former settling basin is not a viable option in this scenario. In order to accomplish this task, approximately 800 linear feet by at least 15 feet deep would need to be removed as shown on Figure 2. The specific removal area is shown as the highlighted orange trapezoid area with property line in the middle. This is approximately 20,000 cubic yards of soil. Once a work design package was completed and approved, a contractor would need to excavate the material, partially dewater the excavation, stockpile the soil in SB-2, backfill the excavation with clean soil, compact, and regrade. The cap at SB-2 would need to be redesigned to accommodate the 20,000 cubic yards of soil generated from the removal activities. Then the cap would be constructed in a similar fashion to the currently approved design. This would add an *additional* $1.5 million to the existing costs for the cap project. The complexities of working adjacent to the railroad track and working in a former ash basin make this work risky and expensive. A basic cost benefit analysis shows that that the work is not worth the small incremental benefit compared to constructing the cap now (with no removal activities) as currently designed.

Again, we seek your assistance in working with DOT to develop a plan to close out NRG's Transfer Act obligations at the Middletown site. If you have any questions about any of the submitted information, please do not hesitate to call. Thank you for your help.

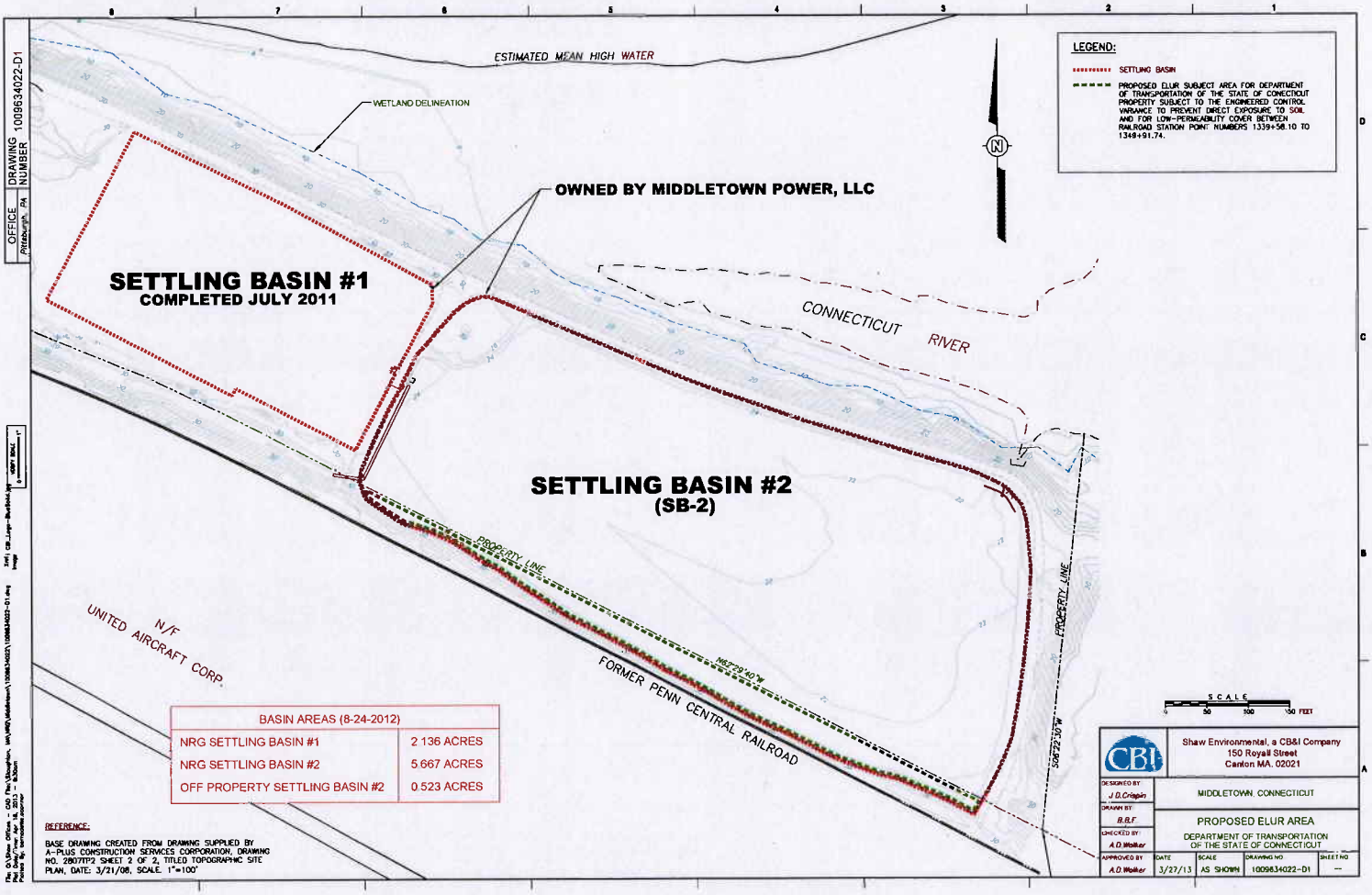
Very truly yours,

Bruce L. McDermott

Drawings

1. Proposed ELUR area
2. Figure 2

cc: David Ringquist, DEEP
Peter Hill, DEEP
Michelle Bedson, DEEP
Juan Perez, EPA
Julie Thomas, CDOT
Tracy Stanton, NRG
Robert Spooner, NRG
Andrew D. Walker
Alfred E. Smith



BASIN AREAS (8-24-2012)	
NRG SETTLING BASIN #1	2.136 ACRES
NRG SETTLING BASIN #2	5.667 ACRES
OFF PROPERTY SETTLING BASIN #2	0.523 ACRES

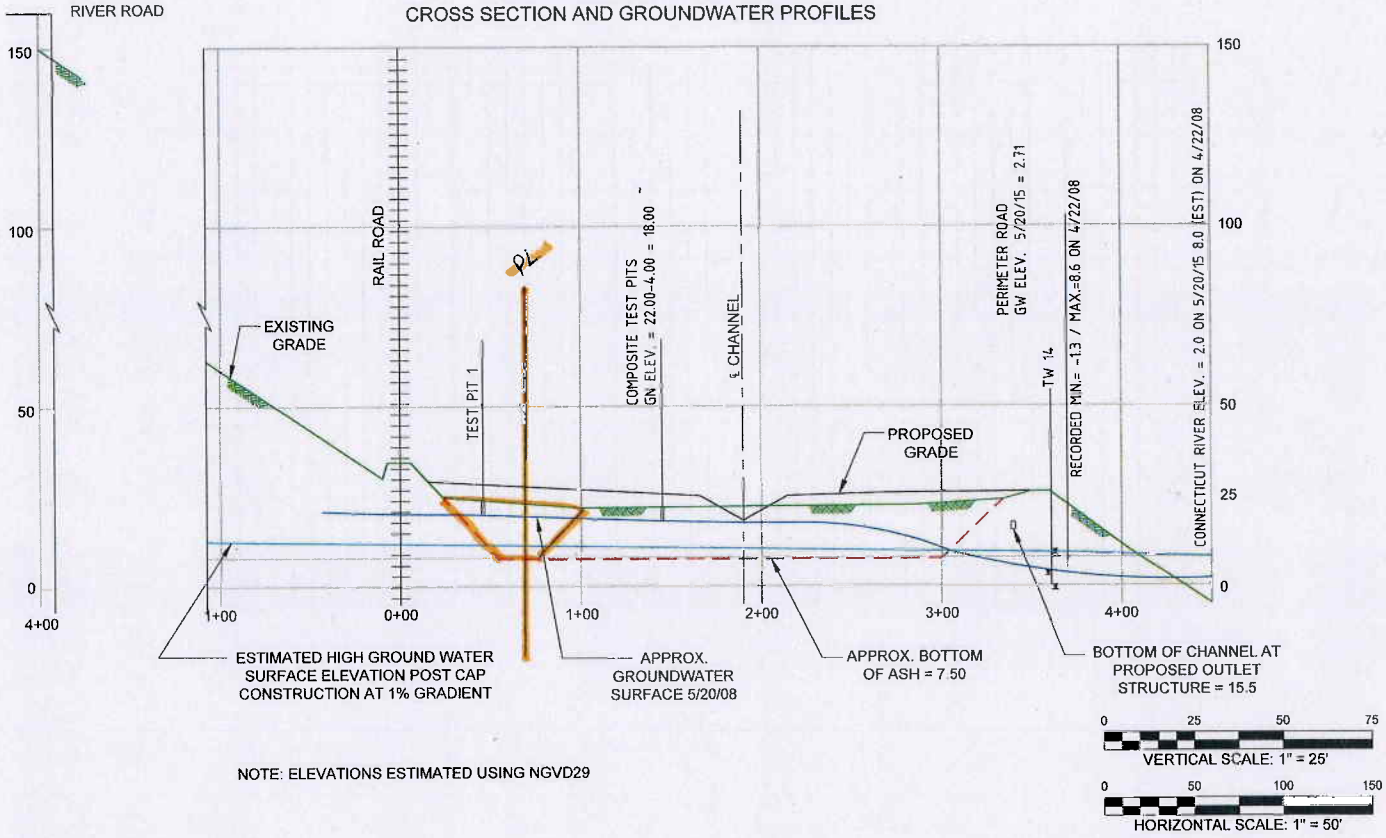
REFERENCE:

BASE DRAWING CREATED FROM DRAWING SUPPLIED BY A-PLUS CONSTRUCTION SERVICES CORPORATION, DRAWING NO. 28077T2 SHEET 2 OF 2, TITLED TOPOGRAPHIC SITE PLAN, DATE: 3/21/08, SCALE: 1"=100'

Shaw Environmental, a CB&I Company
150 Royall Street
Canton MA. 02021

DESIGNED BY: J.D.Crispin	MIDDLETOWN, CONNECTICUT
DRAWN BY: B.B.F.	PROPOSED ELUR AREA
CHECKED BY: A.D.Walker	DEPARTMENT OF TRANSPORTATION OF THE STATE OF CONNECTICUT
APPROVED BY: A.D.Walker	DATE: 3/27/13 · SCALE: AS SHOWN · DRAWING NO: 1009634022-D1 · SHEET NO: --

FIGURE 2
NRG MIDDLETOWN - EC SB-2
CROSS SECTION AND GROUNDWATER PROFILES



NOTE: ELEVATIONS ESTIMATED USING NGVD29

ATTACHMENT 2

Job Name: NRG Middletown
Job Number: 1009634028 - 00121110

Well ID: AOC1-MW1R	Date: 12/10/15	Depth To Water: 31.05	Depth To Bottom: 39.45
Screen Interval:	Target Pump Intake Depth:		
Pump Type: GSO II	Actual Pump Intake Depth: 38'	Total Volume Purged: 3,000 mL	

Time	Depth to Water (ft.)	Pump Dial Setting[1]	Purge Rate (ml./min.)	Cum. Volume Purged (Liters)	Temperature (°C)	pH (SU)	Specific Conductance (ms/cm)[2]	Dissolved Oxygen (mg/L)	ORP[3] (mV)	Turbidity (NTU)	Comments
Stabilization Criteria			3%		3%	0.1	3%	10% or <2	10	10% or <1	for three consecutive readings
1000	31.05	LOW	100 mL/m		11.46	7.13	0.897	1.60	235.0	31.8	CLEAR
1005	31.06				11.67	7.11	0.876	1.55	218.7	22.1	
1010	31.07				12.01	7.09	0.835	1.50	201.1	12.4	
1015	31.08				12.13	7.04	0.817	1.41	183.9	2.0	
1020	31.09				12.21	6.99	0.806	1.32	170.6	0.7	
1025	31.10				12.25	6.95	0.803	1.28	168.1	0.5	
1030	31.11			3,000mL	12.30	6.92	0.801	1.25	166.4	0.3	SAMPLED

1. Pump dial setting (example: Hertz, cycles/min, etc.)
2. µSiemens per cm (same as µmhos/cm) at 25°C.
3. Oxidation reduction potential (ORP)
4. Target Drawdown not to exceed is 0.3 ft (about 4 inches)

Field Personnel: D. Gotty

Job Name: NRG Middletown
Job Number: 1009634028 - 00121110

Well ID: AOC1 - MW2	**Date:** 12/10/15	**Depth To Water:** 31.80	**Depth To Bottom:** 39.90
Screen Interval:	**Target Pump Intake Depth:**		
Pump Type: 650 II	**Actual Pump Intake Depth:** 38'	**Total Volume Purged:** 3,000ml	

Time	Depth to Water (ft.)	Pump Dial Setting[1]	Purge Rate (ml./min.)	Cum. Volume Purged (Liters)	Temperature (°C)	pH (SU)	Specific Conductance (ms/cm)[2]	Dissolved Oxygen (mg/L)	ORP[3] (mV)	Turbidity (NTU)	Comments
Stabilization Criteria			3%		3%	0.1	3%	10% or <2	10	10% or <1	for three consecutive readings
0915	31.80	LOW	100ml/min		15.05	7.07	1.052	2.88	-57.3	39.0	CLEAR
0920	31.81	↓	↓		15.16	7.02	1.073	2.17	-50.5	24.6	↓
0925	31.82				15.22	6.98	1.098	1.46	-44.8	13.3	
0930	31.83				15.27	6.95	1.125	1.08	-40.6	3.0	
0935	31.84				15.32	6.92	1.130	0.99	-33.1	0.9	
0940	31.85				15.34	6.89	1.132	0.95	-31.5	0.7	
0945	31.86	↓	↓	3,000ml	15.35	6.87	1.136	0.92	-30.8	0.6	↓ SAMPLED

1. Pump dial setting (example: Hertz, cycles/min, etc.)
2. µSiemens per cm (same as µmhos/cm) at 25°C.
3. Oxidation reduction potential (ORP)

4. Target Drawdown not to exceed is 0.3 ft (about 4 inches)

Field Personnel: D. LEMAY

Job Name: NRG Middletown
Job Number: 1009634028 - 00121110

Well ID: AOC2-SB1-MW1	Date: 12/10/15	Depth To Water: 24.83	Depth To Bottom: 35.75
Screen Interval:	Target Pump Intake Depth:		
Pump Type: GSO II	Actual Pump Intake Depth: 34'	Total Volume Purged: 3,000 ml	

Time	Depth to Water (ft.)	Pump Dial Setting[1]	Purge Rate (ml./min.)	Cum. Volume Purged (Liters)	Temperature (°C)	pH (SU)	Specific Conductance (ms/cm)[2]	Dissolved Oxygen (mg/L)	ORP[3] (mV)	Turbidity (NTU)	Comments
Stabilization Criteria			3%		3%	0.1	3%	10% or <2	10	10% or <1	for three consecutive readings
1430	24.83	LOW	100 ml/m		15.03	6.04	0.270	4.32	119.1	47.3	CLEAR
1435	24.84	↓	↓		15.11	6.01	0.269	4.10	130.7	21.8	↓
1440	24.85				15.18	5.99	0.268	3.88	155.8	9.2	
1445	24.86				15.23	5.97	0.266	3.54	176.4	2.0	
1450	24.87				15.28	5.96	0.264	3.38	181.3	0.8	
1455	24.88				15.32	5.94	0.262	3.30	182.9	0.6	
1500	24.89	↓	↓	3,000ml	15.36	5.93	0.260	3.27	184.2	0.5	↓ SAMPLED

1. Pump dial setting (example: Hertz, cycles/min, etc.)
2. µSiemens per cm (same as µmhos/cm) at 25°C.
3. Oxidation reduction potential (ORP)
4. Target Drawdown not to exceed is 0.3 ft (about 4 inches)

Field Personnel: D. VEAMY

Job Name: NRG Middletown
Job Number: 1009634028 - 00121110

Well ID: AOC5-MW1				Date: 12/10/15					Depth To Water: 15.86		Depth To Bottom: 24.30
Screen Interval:				Target Pump Intake Depth:							
Pump Type: GEO II				Actual Pump Intake Depth: 23'					Total Volume Purged: 3,000 ml		
Time	Depth to Water (ft.)	Pump Dial Setting[1]	Purge Rate (ml./min.)	Cum. Volume Purged (Liters)	Temperature (°C)	pH (SU)	Specific Conductance (ms/cm)[2]	Dissolved Oxygen (mg/L)	ORP[3] (mV)	Turbidity (NTU)	Comments
Stabilization Criteria			3%		3%	0.1	3%	10% or <2	10	10% or <1	for three consecutive readings
1335	15.86	LOW	100ml		13.04	6.13	0.155	0.84	24.8	27.6	CLEAR
1340	15.87	↓	↓		12.95	6.08	0.162	0.75	10.9	15.2	↓
1345	15.88				12.84	6.02	0.173	0.70	-1.2	6.6	
1350	15.89				12.77	5.99	0.179	0.67	-9.4	1.8	
1355	15.90				12.73	5.96	0.183	0.63	-15.2	0.9	
1400	15.91				12.69	5.94	0.186	0.59	-17.5	0.7	
1405	15.92	↓	↓	3,000ml	12.66	5.92	0.188	0.56	-19.0	0.6	↓ SAMPLED

1. Pump dial setting (example: Hertz, cycles/min, etc.)
2. µSiemens per cm (same as µmhos/cm) at 25°C.
3. Oxidation reduction potential (ORP)

4. Target Drawdown not to exceed is 0.3 ft (about 4 inches)

Field Personnel: D. LEAHY

Job Name: NRG Middletown
Job Number: 1009634028 - 00121110

Well ID: AOC8-SB1-MW1	Date: 12/11/15	Depth To Water: 20.08	Depth To Bottom: 32.03
Screen Interval:	Target Pump Intake Depth:		
Pump Type: GEO II	Actual Pump Intake Depth: 31'	Total Volume Purged: 3,000 ml	

Time	Depth to Water (ft.)	Pump Dial Setting[1]	Purge Rate (ml./min.)	Cum. Volume Purged (Liters)	Temperature (°C)	pH (SU)	Specific Conductance (ms/cm)[2]	Dissolved Oxygen (mg/L)	ORP[3] (mV)	Turbidity (NTU)	Comments
Stabilization Criteria			3%		3%	0.1	3%	10% or <2	10	10% or <1	for three consecutive readings
0900	20.08	LOW	100 ml/m		20.53	6.67	0.222	0.70	-40.7	40.1	CLEAR
0905	20.09	↓	↓		20.70	6.63	0.217	0.67	-52.8	21.7	↓
0910	20.10	↓	↓		21.02	6.58	0.211	0.63	-63.0	12.4	↓
0915	20.11	↓	↓		21.17	6.53	0.206	0.59	-67.2	2.7	↓
0920	20.12	↓	↓		21.36	6.49	0.202	0.56	-71.3	0.9	↓
0925	20.13	↓	↓		21.40	6.46	0.199	0.52	-73.9	0.7	↓
0930	20.14	↓	↓	3,000ml	21.42	6.43	0.198	0.49	-75.6	0.5	↓ SAMPLED

1. Pump dial setting (example: Hertz, cycles/min, etc.)
2. µSiemens per cm (same as µmhos/cm) at 25°C.
3. Oxidation reduction potential (ORP)
4. Target Drawdown not to exceed is 0.3 ft (about 4 inches)

Field Personnel: D. Gray

Job Name: NRG Middletown
Job Number: 1009634028 - 00121110

Well ID: AOC9-SB1-MW1	Date: 12/11/15	Depth To Water: 24.76	Depth To Bottom: 34.62
Screen Interval:	Target Pump Intake Depth:		
Pump Type: GEO II	Actual Pump Intake Depth: 33'	Total Volume Purged: 3,000 ml	

Time	Depth to Water (ft.)	Pump Dial Setting[1]	Purge Rate (ml./min.)	Cum. Volume Purged (Liters)	Temperature (°C)	pH (SU)	Specific Conductance (ms/cm)[2]	Dissolved Oxygen (mg/L)	ORP[3] (mV)	Turbidity (NTU)	Comments
Stabilization Criteria			3%		3%	0.1	3%	10% or <2	10	10% or <1	for three consecutive readings
0740	24.76	LOW	100 ml/min		17.00	6.49	0.854	0.92	-77.3	26.5	CLEAR
0745	24.77				17.56	6.49	0.857	0.84	-80.2	20.7	
0750	24.78				18.00	6.49	0.861	0.79	-83.0	11.5	
0755	24.79				18.05	6.49	0.862	0.74	-86.3	3.3	
0800	24.79				18.19	6.49	0.863	0.66	-89.4	0.8	
0805	24.80				18.21	6.49	0.864	0.62	-91.8	0.5	
0810	24.80	↓	↓	3,000 ml	18.23	6.49	0.865	0.59	-93.9	0.4	↓ SAMPLED

1. Pump dial setting (example: Hertz, cycles/min, etc.)
2. µSiemens per cm (same as µmhos/cm) at 25°C.
3. Oxidation reduction potential (ORP)

4. Target Drawdown not to exceed is 0.3 ft (about 4 inches)

Field Personnel: D. Lamm

Job Name: NRG Middletown
Job Number: 1009634028 - 00121110

Well ID: ACC9-SB2-MW2	**Date:** 12/11/15	**Depth To Water:** 22.12	**Depth To Bottom:** 34.50
Screen Interval:	**Target Pump Intake Depth:**		
Pump Type: GeoTech II	**Actual Pump Intake Depth:** 33'	**Total Volume Purged:** 3,000 ml	

Time	Depth to Water (ft.)	Pump Dial Setting[1]	Purge Rate (ml./min.)	Cum. Volume Purged (Liters)	Temperature (°C)	pH (SU)	Specific Conductance (ms/cm)[2]	Dissolved Oxygen (mg/L)	ORP[3] (mV)	Turbidity (NTU)	Comments
Stabilization Criteria			3%		3%	0.1	3%	10% or <2	10	10% or <1	for three consecutive readings
1015	22.12	LOW	100 ml/m		15.27	6.16	1.500	1.77	-41.6	40.3	CLEAR
1020	22.14	↓	↓		15.22	6.14	1.509	1.33	-45.0	25.6	↓
1025	22.15				15.17	6.17	1.513	1.08	-47.5	13.1	
1030	22.16				15.13	6.18	1.517	0.83	-52.8	2.4	
1035	22.17				15.10	6.19	1.520	0.75	-56.2	0.7	
1040	22.18				15.08	6.22	1.523	0.69	-58.1	0.5	
1045	22.19	↓	↓	3,000ml	15.06	6.24	1.526	0.61	-60.9	0.3	↓ SAMPLED

1. Pump dial setting (example: Hertz, cycles/min, etc.)
2. µSiemens per cm (same as µmhos/cm) at 25°C.
3. Oxidation reduction potential (ORP)
4. Target Drawdown not to exceed is 0.3 ft (about 4 inches)

Field Personnel: D. Vahey

Job Name: NRG Middletown
Job Number: 1009634028 - 00121110

Well ID: TW-10	Date: 12/10/18	Depth To Water: 26.25	Depth To Bottom: 47.45
Screen Interval:	Target Pump Intake Depth:		
Pump Type: GEO II	Actual Pump Intake Depth: 43.46' DD	Total Volume Purged: 3,000 mL	

Time	Depth to Water (ft.)	Pump Dial Setting[1]	Purge Rate (ml./min.)	Cum. Volume Purged (Liters)	Temperature (°C)	pH (SU)	Specific Conductance (ms/cm)[2]	Dissolved Oxygen (mg/L)	ORP[3] (mV)	Turbidity (NTU)	Comments
Stabilization Criteria			3%		3%	0.1	3%	10% or <2	10	10% or <1	for three consecutive readings
0745	26.25	LOW	100 mL/min		14.83	6.70	0.225	2.42	56.9	35.1	CLEAR
~~0750~~	26.26				14.85	6.62	0.228	2.30	58.4	28.7	
0755	26.27				14.91	6.51	0.230	2.21	60.7	7.1	
0800	26.27				14.95	6.45	0.232	2.16	63.4	2.0	
0805	26.28				14.97	6.41	0.234	2.10	65.9	0.8	
0810	26.29				15.00	6.39	0.236	2.05	67.1	0.6	
0815	26.29	↓	↓	3,000 mL	15.02	6.36	0.237	2.02	68.9	0.5	↓ SAMPLED

1. Pump dial setting (example: Hertz, cycles/min, etc.)
2. µSiemens per cm (same as µmhos/cm) at 25°C.
3. Oxidation reduction potential (ORP)
4. Target Drawdown not to exceed is 0.3 ft (about 4 inches)

Field Personnel: D. LEHMAN

Job Name: NRG Middletown
Job Number: 1009634028 - 00121110

Well ID: TW-14	Date: 12/10/15	Depth To Water: 29.32	Depth To Bottom: 42.71
Screen Interval:	Target Pump Intake Depth:		
Pump Type: GEO II	Actual Pump Intake Depth: 41'	Total Volume Purged: 3,000 ml	

Time	Depth to Water (ft.)	Pump Dial Setting[1]	Purge Rate (ml./min.)	Cum. Volume Purged (Liters)	Temperature (°C)	pH (SU)	Specific Conductance (ms/cm)[2]	Dissolved Oxygen (mg/L)	ORP[3] (mV)	Turbidity (NTU)	Comments
Stabilization Criteria			3%		3%	0.1	3%	10% or <2	10	10% or <1	for three consecutive readings
0835	29.32	LOW	100 ml/m		14.15	6.82	0.188	3.26	83.9	25.2	CLEAR
0840	29.33	↓	↓		14.22	6.73	0.185	2.81	72.7	17.8	↓
0845	29.33				14.58	6.49	0.182	2.18	68.1	10.7	
0850	29.34				14.73	6.42	0.179	1.95	57.8	1.9	
0855	29.34				14.80	6.37	0.177	1.86	48.0	0.6	
0900	29.35				14.84	6.34	0.176	1.81	45.9	0.5	
0905	29.35	↓	↓	3,000ml	14.88	6.32	0.175	1.77	44.6	0.3	↓ SAMPLED

1. Pump dial setting (example: Hertz, cycles/min, etc.)
2. µSiemens per cm (same as µmhos/cm) at 25°C.
3. Oxidation reduction potential (ORP)
4. Target Drawdown not to exceed is 0.3 ft (about 4 inches)

Field Personnel: D. Gentry

Job Name: NRG Middletown
Job Number: 1009634028 - 00121110

Well ID: TW-17D	Date: 12/10/15	Depth To Water: 31.41	Depth To Bottom: 39.78
Screen Interval:	Target Pump Intake Depth:		
Pump Type: GEO II	Actual Pump Intake Depth: 38'	Total Volume Purged: 3,000 ml	

Time	Depth to Water (ft.)	Pump Dial Setting[1]	Purge Rate (ml./min.)	Cum. Volume Purged (Liters)	Temperature (°C)	pH (SU)	Specific Conductance (ms/cm)[2]	Dissolved Oxygen (mg/L)	ORP[3] (mV)	Turbidity (NTU)	Comments
Stabilization Criteria			3%		3%	0.1	3%	10% or <2	10	10% or <1	for three consecutive readings
1155	31.41	LOW	100 ml/m		15.22	7.05	0.761	3.05	18.0	30.9	CLEAR
1200	31.42	↓	↓		15.29	7.08	0.773	2.75	26.7	14.0	↓
1205	31.43				15.38	7.12	0.781	2.36	32.5	3.3	
1210	31.44				15.45	7.15	0.785	2.02	49.3	1.9	
1215	31.44				15.51	7.17	0.788	1.83	57.9	0.8	
1220	31.45				15.55	7.18	0.791	1.76	60.5	0.7	
1225	31.46	↓	↓	3,000ml	15.57	7.19	0.793	1.72	61.7	0.5	↓ SAMPLED

1. Pump dial setting (example: Hertz, cycles/min, etc.)
2. µSiemens per cm (same as µmhos/cm) at 25°C.
3. Oxidation reduction potential (ORP)
4. Target Drawdown not to exceed is 0.3 ft (about 4 inches)

Field Personnel: D. Lemay

Job Name: NRG Middletown
Job Number: 1009634028 - 00121110

Well ID: TW-18	Date: 12/10/15	Depth To Water: 34.09	Depth To Bottom: 41.15
Screen Interval:	Target Pump Intake Depth:		
Pump Type: GEO II	Actual Pump Intake Depth: 40'	Total Volume Purged: 3,000 ml	

Time	Depth to Water (ft.)	Pump Dial Setting[1]	Purge Rate (ml./min.)	Cum. Volume Purged (Liters)	Temperature (°C)	pH (SU)	Specific Conductance (ms/cm)[2]	Dissolved Oxygen (mg/L)	ORP[3] (mV)	Turbidity (NTU)	Comments
Stabilization Criteria			3%		3%	0.1	3%	10% or <2	10	10% or <1	for three consecutive readings
1050	34.09	LOW	100 ml/min		12.35	7.56	0.635	3.17	2.6	31.9	CLEAR
1055	34.10	↓	↓		12.41	7.58	0.637	2.57	9.4	20.7	↓
1100	34.11				12.47	7.61	0.640	2.19	18.3	8.8	
1105	34.12				12.55	7.65	0.645	1.83	22.1	3.3	
1110	34.13				12.60	7.68	0.649	1.74	25.9	0.8	
1115	34.14				12.63	7.72	0.651	1.69	27.9	0.6	
1120	34.15	↓	↓	3,000 ml	12.66	7.75	0.653	1.67	28.4	0.4	↓ SAMPLED
					* ALSO DID MS/MSD				DUP (DD)		

1. Pump dial setting (example: Hertz, cycles/min, etc.)
2. µSiemens per cm (same as µmhos/cm) at 25°C.
3. Oxidation reduction potential (ORP)
4. Target Drawdown not to exceed is 0.3 ft (about 4 inches)

Field Personnel: D. Leahy

Job Name: NRG Middletown
Job Number: 1009634028 - 00121110

Well ID: TW-2D	**Date:** 12/10/15	**Depth To Water:** 31.26	**Depth To Bottom:** 41.10
Screen Interval:	**Target Pump Intake Depth:**		
Pump Type: GZO II	**Actual Pump Intake Depth:** 40'	**Total Volume Purged:** 3,000 ml	

Time	Depth to Water (ft.)	Pump Dial Setting[1]	Purge Rate (ml./min.)	Cum. Volume Purged (Liters)	Temperature (°C)	pH (SU)	Specific Conductance (ms/cm)[2]	Dissolved Oxygen (mg/L)	ORP[3] (mV)	Turbidity (NTU)	Comments
Stabilization Criteria			3%		3%	0.1	3%	10% or <2	10	10% or <1	for three consecutive readings
1250	31.26	LOW	100 ml/min		14.83	7.13	0.560	2.88	0.5	26.1	CLEAR
1255	31.27	↓	↓		14.98	7.26	0.565	2.12	4.8	16.7	↓
1300	31.28				15.08	7.30	0.568	1.67	12.5	9.2	
1305	31.29				15.11	7.37	0.572	1.56	19.2	2.8	
1310	31.30				15.14	7.40	0.577	1.48	21.7	0.7	
1315	31.31				15.16	7.42	0.581	1.43	23.9	0.5	
1320	31.32	↓	↓	3,000 ml	15.17	7.44	0.585	1.40	25.3	0.3	↓ SAMPLED

1. Pump dial setting (example: Hertz, cycles/min, etc.)
2. µSiemens per cm (same as µmhos/cm) at 25°C.
3. Oxidation reduction potential (ORP)
4. Target Drawdown not to exceed is 0.3 ft (about 4 inches)

Field Personnel: D. Kenny

ATTACHMENT 3

Data Usability Worksheet

Project Name : NRG Middletown

Job Number : 1009634028

Prepared By: Ana Fioretti
Date : 1/5/2016
Validated By: Ana Fioretti
Date : 1/5/2016
Matrix: Groundwater

Analyte Group : PAH 8270D SIM
MADEP EPH
Metals

Analytical Method : 8270D SIM
MADEP EPH
EPA 6010C

Completed RCP Certification Form included: Yes

Laboratory ID No. : MC43503

Chain of Custody included in Data Package ? Yes

Is it Complete ? Yes

Sample Collection Date	Analysis	Allowable Holding Time for	Allowable Holding Time	Analysis Date
12/10/15, 12/11/15	PAH 8270D SIM	14 Days	40 Days	12/24/15
12/10/15, 12/11/15	MADEP EPH	14 Days	40 Days	12/22/15
12/11/2015	EPA 6010C (Ar)	180 Days	180 Days	12/21/15
12/10/15, 12/11/15	EPA 6010C (METALS)	180 Days	180 Days	12/21/15

Sample temperature within QC limits: Yes, 1.0° C

Surrogate Recovery
Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: N/A

MS/MSD
Are all MS/MSD sample recoveries within the QC limits ? N/A

If No, list sample ID, date and compound where limit was e: N/A

Laboratory Control Samples
Are all laboratory control sample recoveries within the QC li Yes

If no, list sample ID where range was exceeded:

Equipment Field Blank ID : EB-1 12/10/2015
Trace amounts of Naphthalene (0.17 ug/L/5X = 0.75) detected in the EB; This contaminant also detected in the method blank
Trace amounts of zinc (1.5 ug/L/5X = 7.5) detected in the EB; Zinc results qualified U where results are < 5X the amount found in the blank.

Trip Blank ID : N/A

Method Blank: OP45788-MB 12/22/2015, 12/18/15

Were any compounds identified in the method blank, field blank or trip blank above detection limits ? ~~No~~ Yes

If so, list Sample ID/Compound/Concentration/Units: See Notes

Notes:

Batch ID: OP45788
Sample(s) MC43503-10, MC43503-12, MC43503-13, MC43503-14, MC43503-15, MC43503-3 have compound(s) reported with a “B” qualifier, indicating analyte is found in the associated method blank.
Trace amounts of naphthalene (0.18 ug/L/ 5X = 0.9) were detected in OP45788-MB method blank.
Qualify these compounds where results are < 5X the amount found in the blank as "U" for associated samples.

MC43503-10, 12, 13, 14, 15, 3, OP45788-BS/BSD/MB have Nitrobenzene-d5, Terphenyl-d14 outside control limits. Surrogate standard not added. EPH extract analyzed.
No qualification necessary

Quadratic regression is employed for initial calibration standard MSI3694-ICC3694 for Benzo[a]anthracene, Benzo[b]fluoranthene, Benzo[k]fluoranthene, Benzo[a]pyrene, Indeno[1,2,3-cd]pyrene, Dibenz[a,h]anthracene, Benzo[g,h,i]perylene.

Batch ID: MP25623
Sample(s) MC43534-8SDL were used as the QC samples for metals.

RPD(s) for Serial Dilution for Lead are outside control limits for sample MP25623-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL). No qualification necessary

Results reported > MDL and < RL qualified "J" unless U qualified due to blank contamination.

Reviewed By: Kim Napier

Accutest Laboratories

Report of Analysis

Client Sample ID:	TW-10		
Lab Sample ID:	MC43503-1	Date Sampled:	12/10/15
Matrix:	AQ - Ground Water	Date Received:	12/15/15
		Percent Solids:	n/a
Project:	NRG Middletown, 1866 River Road, Middletown, CT		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	12/18/15	12/21/15 EC	SW846 6010C [1]	SW846 3010A [2]
Lead	1.7 U	5.0	1.7	ug/l	1	12/18/15	12/21/15 EC	SW846 6010C [1]	SW846 3010A [2]
Selenium	2.0 U	10	2.0	ug/l	1	12/18/15	12/21/15 EC	SW846 6010C [1]	SW846 3010A [2]
Vanadium	5.0 B J	10	0.51	ug/l	1	12/18/15	12/21/15 EC	SW846 6010C [1]	SW846 3010A [2]
Zinc	5.5 B J	20	1.0	ug/l	1	12/18/15	12/21/15 EC	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18774
(2) Prep QC Batch: MP25623

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

Accutest Laboratories

Report of Analysis

Client Sample ID:	TW-14		
Lab Sample ID:	MC43503-2	Date Sampled:	12/10/15
Matrix:	AQ - Ground Water	Date Received:	12/15/15
		Percent Solids:	n/a
Project:	NRG Middletown, 1866 River Road, Middletown, CT		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Lead	1.7 U	5.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Selenium	2.0 U	10	2.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Vanadium	2.2 B J	10	0.51	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Zinc	2.4 B U	20	1.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18774
(2) Prep QC Batch: MP25623

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

Accutest Laboratories

Report of Analysis

Client Sample ID:	AOC1-MW2		
Lab Sample ID:	MC43503-4	Date Sampled:	12/10/15
Matrix:	AQ - Ground Water	Date Received:	12/15/15
		Percent Solids:	n/a
Project:	NRG Middletown, 1866 River Road, Middletown, CT		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	1.7 B J	4.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Lead	1.7 U	5.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Selenium	2.0 U	10	2.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Vanadium	0.51 U	10	0.51	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Zinc	1.1 B U	20	1.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18774
(2) Prep QC Batch: MP25623

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Accutest Laboratories

Report of Analysis

Client Sample ID:	AOC1-MW1R		
Lab Sample ID:	MC43503-5	Date Sampled:	12/10/15
Matrix:	AQ - Ground Water	Date Received:	12/15/15
		Percent Solids:	n/a
Project:	NRG Middletown, 1866 River Road, Middletown, CT		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Lead	1.7 U	5.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Selenium	8.0 B J	10	2.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Vanadium	1.3 B J	10	0.51	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Zinc	3.8 B U	20	1.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18774
(2) Prep QC Batch: MP25623

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

Report of Analysis

Client Sample ID:	TW-18		
Lab Sample ID:	MC43503-6	Date Sampled:	12/10/15
Matrix:	AQ - Ground Water	Date Received:	12/15/15
		Percent Solids:	n/a
Project:	NRG Middletown, 1866 River Road, Middletown, CT		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Lead	1.7 U	5.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Selenium	2.0 U	10	2.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Vanadium	11.0	10	0.51	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Zinc	1.8 B U	20	1.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18774
(2) Prep QC Batch: MP25623

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Accutest Laboratories

Report of Analysis

Client Sample ID:	TW-18 DUP		
Lab Sample ID:	MC43503-7	Date Sampled:	12/10/15
Matrix:	AQ - Ground Water	Date Received:	12/15/15
		Percent Solids:	n/a
Project:	NRG Middletown, 1866 River Road, Middletown, CT		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Lead	1.7 U	5.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Selenium	2.0 U	10	2.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Vanadium	11.1	10	0.51	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Zinc	1.6 B	20	1.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18774
(2) Prep QC Batch: MP25623

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

Accutest Laboratories

Report of Analysis

Client Sample ID:	TW-17D		
Lab Sample ID:	MC43503-8	Date Sampled:	12/10/15
Matrix:	AQ - Ground Water	Date Received:	12/15/15
		Percent Solids:	n/a
Project:	NRG Middletown, 1866 River Road, Middletown, CT		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Lead	1.7 U	5.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Selenium	50.3	10	2.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Vanadium	298	10	0.51	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Zinc	3.6 B U	20	1.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18774
(2) Prep QC Batch: MP25623

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

Accutest Laboratories

Report of Analysis

Client Sample ID:	TW-21D		
Lab Sample ID:	MC43503-9	Date Sampled:	12/10/15
Matrix:	AQ - Ground Water	Date Received:	12/15/15
		Percent Solids:	n/a
Project:	NRG Middletown, 1866 River Road, Middletown, CT		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Lead	1.7 U	5.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Selenium	35.9	10	2.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Vanadium	6.8 B J	10	0.51	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Zinc	3.0 B U	20	1.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18774
(2) Prep QC Batch: MP25623

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result >= MDL but < RL

Accutest Laboratories

Report of Analysis

Client Sample ID:	AOC5-MW1		
Lab Sample ID:	MC43503-10	Date Sampled:	12/10/15
Matrix:	AQ - Ground Water	Date Received:	12/15/15
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	NRG Middletown, 1866 River Road, Middletown, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I99580.D	1	12/24/15	MR	12/16/15	OP45788	MSI3723
Run #2							

	Initial Volume	Final Volume
Run #1	1070 ml	2.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.19	0.014	ug/l	
208-96-8	Acenaphthylene	ND	0.19	0.016	ug/l	
120-12-7	Anthracene	ND	0.19	0.018	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.094	0.044	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.19	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.094	0.036	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.19	0.023	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.19	0.019	ug/l	
218-01-9	Chrysene	ND	0.19	0.025	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.19	0.028	ug/l	
206-44-0	Fluoranthene	ND	0.19	0.014	ug/l	
86-73-7	Fluorene	ND	0.19	0.028	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.19	0.038	ug/l	
91-57-6	2-Methylnaphthalene	ND	3.8	0.021	ug/l	
91-20-3	Naphthalene	0.14	3.8	0.015	ug/l	JB
85-01-8	Phenanthrene	ND	0.094	0.020	ug/l	
129-00-0	Pyrene	ND	0.19	0.016	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	0% [a]		26-121%
321-60-8	2-Fluorobiphenyl	69%		28-107%
1718-51-0	Terphenyl-d14	0% [a]		29-129%

(a) Surrogate standard not added. EPH extract analyzed.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	AOC2-SB1-MW1		
Lab Sample ID:	MC43503-11	Date Sampled:	12/10/15
Matrix:	AQ - Ground Water	Date Received:	12/15/15
		Percent Solids:	n/a
Project:	NRG Middletown, 1866 River Road, Middletown, CT		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Lead	1.7 U	5.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Selenium	2.0 U	10	2.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Vanadium	0.51 U	10	0.51	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Zinc	1.6 B	20	1.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18774
(2) Prep QC Batch: MP25623

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	AOC9-SB1-MW1		
Lab Sample ID:	MC43503-12	Date Sampled:	12/11/15
Matrix:	AQ - Ground Water	Date Received:	12/15/15
		Percent Solids:	n/a
Project:	NRG Middletown, 1866 River Road, Middletown, CT		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.7 B J	4.0	1.7	ug/l	1	12/18/15	12/21/15 EC	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18774
(2) Prep QC Batch: MP25623

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Accutest Laboratories

Report of Analysis

Client Sample ID:	AOC9-SB1-MW1		
Lab Sample ID:	MC43503-12	Date Sampled:	12/11/15
Matrix:	AQ - Ground Water	Date Received:	12/15/15
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	NRG Middletown, 1866 River Road, Middletown, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I99581.D	1	12/24/15	MR	12/16/15	OP45788	MSI3723
Run #2							

	Initial Volume	Final Volume
Run #1	1070 ml	2.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.19	0.014	ug/l	
208-96-8	Acenaphthylene	ND	0.19	0.016	ug/l	
120-12-7	Anthracene	ND	0.19	0.018	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.094	0.044	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.19	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.094	0.036	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.19	0.023	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.19	0.019	ug/l	
218-01-9	Chrysene	ND	0.19	0.025	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.19	0.028	ug/l	
206-44-0	Fluoranthene	ND	0.19	0.014	ug/l	
86-73-7	Fluorene	ND	0.19	0.028	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.19	0.038	ug/l	
91-57-6	2-Methylnaphthalene	ND	3.8	0.021	ug/l	
91-20-3	Naphthalene	0.13	3.8	0.015	ug/l	JB U
85-01-8	Phenanthrene	ND	0.094	0.020	ug/l	
129-00-0	Pyrene	ND	0.19	0.016	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	0% [a]		26-121%
321-60-8	2-Fluorobiphenyl	68%		28-107%
1718-51-0	Terphenyl-d14	0% [a]		29-129%

(a) Surrogate standard not added. EPH extract analyzed.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	AOC8-SB1-MW1		
Lab Sample ID:	MC43503-13	Date Sampled:	12/11/15
Matrix:	AQ - Ground Water	Date Received:	12/15/15
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	NRG Middletown, 1866 River Road, Middletown, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I99582.D	1	12/24/15	MR	12/16/15	OP45788	MSI3723
Run #2							

	Initial Volume	Final Volume
Run #1	1060 ml	2.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q	
83-32-9	Acenaphthene	1.6	0.19	0.014	ug/l		
208-96-8	Acenaphthylene	0.27	0.19	0.016	ug/l		
120-12-7	Anthracene	ND	0.19	0.018	ug/l		
56-55-3	Benzo(a)anthracene	ND	0.094	0.045	ug/l		
50-32-8	Benzo(a)pyrene	ND	0.19	0.029	ug/l		
205-99-2	Benzo(b)fluoranthene	ND	0.094	0.036	ug/l		
191-24-2	Benzo(g,h,i)perylene	ND	0.19	0.024	ug/l		
207-08-9	Benzo(k)fluoranthene	ND	0.19	0.019	ug/l		
218-01-9	Chrysene	ND	0.19	0.025	ug/l		
53-70-3	Dibenzo(a,h)anthracene	ND	0.19	0.028	ug/l		
206-44-0	Fluoranthene	0.029	0.19	0.014	ug/l	J	J
86-73-7	Fluorene	3.2	0.19	0.028	ug/l		
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.19	0.038	ug/l		
91-57-6	2-Methylnaphthalene	ND	3.8	0.021	ug/l		
91-20-3	Naphthalene	0.42	3.8	0.015	ug/l	JB	U
85-01-8	Phenanthrene	1.2	0.094	0.020	ug/l		
129-00-0	Pyrene	0.078	0.19	0.016	ug/l	J	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	0% [a]		26-121%
321-60-8	2-Fluorobiphenyl	65%		28-107%
1718-51-0	Terphenyl-d14	0% [a]		29-129%

(a) Surrogate standard not added. EPH extract analyzed.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	AOC8-SB1-MW1		
Lab Sample ID:	MC43503-13	Date Sampled:	12/11/15
Matrix:	AQ - Ground Water	Date Received:	12/15/15
Method:	MADEP EPH REV 1.1 SW846 3510C	Percent Solids:	n/a
Project:	NRG Middletown, 1866 River Road, Middletown, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE12784.D	1	12/22/15	TA	12/16/15	OP45787	GDE709
Run #2							

	Initial Volume	Final Volume
Run #1	1060 ml	2.0 ml
Run #2		

Extractable TPHC Ranges

CAS No.	Compound	Result	RL	MDL	Units	Q
	C11-C22 Aromatics (Unadj.)	270	94	66	ug/l	
	C9-C18 Aliphatics	80.7	94	66	ug/l	J
	C19-C36 Aliphatics	ND	94	66	ug/l	
	C11-C22 Aromatics	256	94	66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	60%		40-140%
321-60-8	2-Fluorobiphenyl	79%		40-140%
3386-33-2	1-Chlorooctadecane	69%		40-140%
580-13-2	2-Bromonaphthalene	82%		40-140%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	AOC8-SB1-MW1 DUP		
Lab Sample ID:	MC43503-14	Date Sampled:	12/11/15
Matrix:	AQ - Ground Water	Date Received:	12/15/15
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	NRG Middletown, 1866 River Road, Middletown, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I99583.D	1	12/24/15	MR	12/16/15	OP45788	MSI3723
Run #2							

	Initial Volume	Final Volume
Run #1	1070 ml	2.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q	
83-32-9	Acenaphthene	1.4	0.19	0.014	ug/l		
208-96-8	Acenaphthylene	0.23	0.19	0.016	ug/l		
120-12-7	Anthracene	ND	0.19	0.018	ug/l		
56-55-3	Benzo(a)anthracene	ND	0.094	0.044	ug/l		
50-32-8	Benzo(a)pyrene	ND	0.19	0.029	ug/l		
205-99-2	Benzo(b)fluoranthene	ND	0.094	0.036	ug/l		
191-24-2	Benzo(g,h,i)perylene	ND	0.19	0.023	ug/l		
207-08-9	Benzo(k)fluoranthene	ND	0.19	0.019	ug/l		
218-01-9	Chrysene	ND	0.19	0.025	ug/l		
53-70-3	Dibenzo(a,h)anthracene	ND	0.19	0.028	ug/l		
206-44-0	Fluoranthene	ND	0.19	0.014	ug/l		
86-73-7	Fluorene	3.4	0.19	0.028	ug/l		
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.19	0.038	ug/l		
91-57-6	2-Methylnaphthalene	ND	3.8	0.021	ug/l		
91-20-3	Naphthalene	0.30	3.8	0.015	ug/l	JB	U
85-01-8	Phenanthrene	1.5	0.094	0.020	ug/l		
129-00-0	Pyrene	0.057	0.19	0.016	ug/l	J	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	0% [a]		26-121%
321-60-8	2-Fluorobiphenyl	65%		28-107%
1718-51-0	Terphenyl-d14	0% [a]		29-129%

(a) Surrogate standard not added. EPH extract analyzed.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	AOC8-SB1-MW1 DUP		
Lab Sample ID:	MC43503-14	Date Sampled:	12/11/15
Matrix:	AQ - Ground Water	Date Received:	12/15/15
Method:	MADEP EPH REV 1.1 SW846 3510C	Percent Solids:	n/a
Project:	NRG Middletown, 1866 River Road, Middletown, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE12785.D	1	12/22/15	TA	12/16/15	OP45787	GDE709
Run #2							

	Initial Volume	Final Volume
Run #1	1070 ml	2.0 ml
Run #2		

Extractable TPHC Ranges

CAS No.	Compound	Result	RL	MDL	Units	Q
	C11-C22 Aromatics (Unadj.)	214	94	66	ug/l	
	C9-C18 Aliphatics	69.1	94	66	ug/l	J
	C19-C36 Aliphatics	ND	94	66	ug/l	
	C11-C22 Aromatics	205	94	66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	55%		40-140%
321-60-8	2-Fluorobiphenyl	76%		40-140%
3386-33-2	1-Chlorooctadecane	74%		40-140%
580-13-2	2-Bromonaphthalene	79%		40-140%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	AOC9-SB2-MW2		
Lab Sample ID:	MC43503-15	Date Sampled:	12/11/15
Matrix:	AQ - Ground Water	Date Received:	12/15/15
Method:	SW846 8270D BY SIM SW846 3510C	Percent Solids:	n/a
Project:	NRG Middletown, 1866 River Road, Middletown, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I99584.D	1	12/24/15	MR	12/16/15	OP45788	MSI3723
Run #2							

	Initial Volume	Final Volume
Run #1	1070 ml	2.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q	
83-32-9	Acenaphthene	0.16	0.19	0.014	ug/l	J	J
208-96-8	Acenaphthylene	ND	0.19	0.016	ug/l		
120-12-7	Anthracene	0.043	0.19	0.018	ug/l	J	J
56-55-3	Benzo(a)anthracene	ND	0.094	0.044	ug/l		
50-32-8	Benzo(a)pyrene	ND	0.19	0.029	ug/l		
205-99-2	Benzo(b)fluoranthene	ND	0.094	0.036	ug/l		
191-24-2	Benzo(g,h,i)perylene	ND	0.19	0.023	ug/l		
207-08-9	Benzo(k)fluoranthene	ND	0.19	0.019	ug/l		
218-01-9	Chrysene	ND	0.19	0.025	ug/l		
53-70-3	Dibenzo(a,h)anthracene	ND	0.19	0.028	ug/l		
206-44-0	Fluoranthene	0.036	0.19	0.014	ug/l	J	J
86-73-7	Fluorene	0.082	0.19	0.028	ug/l	J	J
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.19	0.038	ug/l		
91-57-6	2-Methylnaphthalene	ND	3.8	0.021	ug/l		
91-20-3	Naphthalene	0.14	3.8	0.015	ug/l	JB	U
85-01-8	Phenanthrene	ND	0.094	0.020	ug/l		
129-00-0	Pyrene	0.033	0.19	0.016	ug/l	J	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	0% [a]		26-121%
321-60-8	2-Fluorobiphenyl	71%		28-107%
1718-51-0	Terphenyl-d14	0% [a]		29-129%

(a) Surrogate standard not added. EPH extract analyzed.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

New England ACCUTEST LABORATORIES

12/30/15

Technical Report for

CB&I

NRG Middletown, 1866 River Road, Middletown, CT

1009634028-00121110

Accutest Job Number: MC43503

Sampling Dates: 12/10/15 - 12/11/15

Report to:

CB&I
150 Royall Street
Cantonton, MA 02021
andrew.walker@cbi.com; catherine.joe@cbi.com

ATTN: Andrew Walker

Total number of pages in report: **62**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Reza Tand
Lab Director

Client Service contact: Frank DAgostino 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) WI (399080220) DoD ELAP (L-A-B L2235)

Test results relate only to samples analyzed.

Sections: 1 2 3 4 5 6 7 8

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Sample Summary

CB&I

Job No: MC43503

NRG Middletown, 1866 River Road, Middletown, CT
Project No: 1009634028-00121110

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC43503-1	12/10/15	08:15	DL	12/15/15	AQ	Ground Water	TW-10
MC43503-2	12/10/15	09:05	DL	12/15/15	AQ	Ground Water	TW-14
MC43503-3	12/10/15	07:40	DL	12/15/15	AQ	Equipment Blank	EB-1
MC43503-4	12/10/15	09:45	DL	12/15/15	AQ	Ground Water	AOC1-MW2
MC43503-5	12/10/15	10:30	DL	12/15/15	AQ	Ground Water	AOC1-MW1R
MC43503-6	12/10/15	11:20	DL	12/15/15	AQ	Ground Water	TW-18
MC43503-7	12/10/15	11:20	DL	12/15/15	AQ	Ground Water	TW-18 DUP
MC43503-8	12/10/15	12:25	DL	12/15/15	AQ	Ground Water	TW-17D
MC43503-9	12/10/15	13:20	DL	12/15/15	AQ	Ground Water	TW-21D
MC43503-10	12/10/15	14:05	DL	12/15/15	AQ	Ground Water	AOC5-MW1
MC43503-11	12/10/15	15:00	DL	12/15/15	AQ	Ground Water	AOC2-SB1-MW1
MC43503-12	12/11/15	08:10	DL	12/15/15	AQ	Ground Water	AOC9-SB1-MW1
MC43503-13	12/11/15	09:30	DL	12/15/15	AQ	Ground Water	AOC8-SB1-MW1

Sample Summary
(continued)

CB&I

Job No: MC43503

NRG Middletown, 1866 River Road, Middletown, CT
Project No: 1009634028-00121110

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC43503-14	12/11/15	09:30	DL	12/15/15	AQ	Ground Water	AOC8-SB1-MW1 DUP
MC43503-15	12/11/15	10:45	DL	12/15/15	AQ	Ground Water	AOC9-SB2-MW2

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: CB&I **Job No** MC43503

Site: NRG Middletown, 1866 River Road, Middletown, CT **Report Date** 12/30/2015 9:56:33 AM

15 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were collected on between 12/10/2015 and 12/11/2015 and were received at Accutest on 12/15/2015 properly preserved, at 1 Deg. C and intact. These Samples received an Accutest job number of MC43503. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix: AQ **Batch ID:** OP45788

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- PAH Sim requested.
- Sample(s) MC43503-10, MC43503-12, MC43503-13, MC43503-14, MC43503-15, MC43503-3 have compound(s) reported with a “B” qualifier, indicating analyte is found in the associated method blank.
- MC43503-10, 12, 13, 14, 15, 3, OP45788-BS/BSD/MB have Nitrobenzene-d5, Terphenyl-d14 outside control limits. Surrogate standard not added. EPH extract analyzed.
- Quadratic regression is employed for initial calibration standard MSI3694-ICC3694 for Benzo[a]anthracene, Benzo[b]fluoranthene, Benzo[k]fluoranthene, Benzo[a]pyrene, Indeno[1,2,3-cd]pyrene, Dibenz[a,h]anthracene, Benzo[g,h,i]perylene.

Extractables by GC By Method MADEP EPH REV 1.1

Matrix: AQ **Batch ID:** OP45787

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Only ranges requested.

Metals By Method SW846 6010C

Matrix: AQ **Batch ID:** MP25623

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC43534-8SDL were used as the QC samples for metals.
- Only selected metals requested.
- RPD(s) for Serial Dilution for Lead are outside control limits for sample MP25623-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety.The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(MC43503).

Summary of Hits

Job Number: MC43503
Account: CB&I
Project: NRG Middletown, 1866 River Road, Middletown, CT
Collected: 12/10/15 thru 12/11/15

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC43503-1	**TW-10**					
Vanadium		5.0 B	10	0.51	ug/l	SW846 6010C
Zinc		5.5 B	20	1.0	ug/l	SW846 6010C
MC43503-2	**TW-14**					
Vanadium		2.2 B	10	0.51	ug/l	SW846 6010C
Zinc		2.4 B	20	1.0	ug/l	SW846 6010C
MC43503-3	**EB-1**					
Naphthalene		0.17 JB	3.8	0.015	ug/l	SW846 8270D BY SIM
Zinc		1.5 B	20	1.0	ug/l	SW846 6010C
MC43503-4	**AOC1-MW2**					
Arsenic		1.7 B	4.0	1.7	ug/l	SW846 6010C
Zinc		1.1 B	20	1.0	ug/l	SW846 6010C
MC43503-5	**AOC1-MW1R**					
Selenium		8.0 B	10	2.0	ug/l	SW846 6010C
Vanadium		1.3 B	10	0.51	ug/l	SW846 6010C
Zinc		3.8 B	20	1.0	ug/l	SW846 6010C
MC43503-6	**TW-18**					
Vanadium		11.0	10	0.51	ug/l	SW846 6010C
Zinc		1.8 B	20	1.0	ug/l	SW846 6010C
MC43503-7	**TW-18 DUP**					
Vanadium		11.1	10	0.51	ug/l	SW846 6010C
Zinc		1.6 B	20	1.0	ug/l	SW846 6010C
MC43503-8	**TW-17D**					
Selenium		50.3	10	2.0	ug/l	SW846 6010C
Vanadium		298	10	0.51	ug/l	SW846 6010C
Zinc		3.6 B	20	1.0	ug/l	SW846 6010C
MC43503-9	**TW-21D**					
Selenium		35.9	10	2.0	ug/l	SW846 6010C

Summary of Hits

Job Number: MC43503
Account: CB&I
Project: NRG Middletown, 1866 River Road, Middletown, CT
Collected: 12/10/15 thru 12/11/15

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Vanadium		6.8 B	10	0.51	ug/l	SW846 6010C
Zinc		3.0 B	20	1.0	ug/l	SW846 6010C
MC43503-10	**AOC5-MW1**					
Naphthalene		0.14 JB	3.8	0.015	ug/l	SW846 8270D BY SIM
MC43503-11	**AOC2-SB1-MW1**					
Zinc		1.6 B	20	1.0	ug/l	SW846 6010C
MC43503-12	**AOC9-SB1-MW1**					
Naphthalene		0.13 JB	3.8	0.015	ug/l	SW846 8270D BY SIM
Arsenic		1.7 B	4.0	1.7	ug/l	SW846 6010C
MC43503-13	**AOC8-SB1-MW1**					
Acenaphthene		1.6	0.19	0.014	ug/l	SW846 8270D BY SIM
Acenaphthylene		0.27	0.19	0.016	ug/l	SW846 8270D BY SIM
Fluoranthene		0.029 J	0.19	0.014	ug/l	SW846 8270D BY SIM
Fluorene		3.2	0.19	0.028	ug/l	SW846 8270D BY SIM
Naphthalene		0.42 JB	3.8	0.015	ug/l	SW846 8270D BY SIM
Phenanthrene		1.2	0.094	0.020	ug/l	SW846 8270D BY SIM
Pyrene		0.078 J	0.19	0.016	ug/l	SW846 8270D BY SIM
C11-C22 Aromatics (Unadj.)		270	94	66	ug/l	MADEP EPH REV 1.1
C9-C18 Aliphatics		80.7 J	94	66	ug/l	MADEP EPH REV 1.1
C11-C22 Aromatics		256	94	66	ug/l	MADEP EPH REV 1.1
MC43503-14	**AOC8-SB1-MW1 DUP**					
Acenaphthene		1.4	0.19	0.014	ug/l	SW846 8270D BY SIM
Acenaphthylene		0.23	0.19	0.016	ug/l	SW846 8270D BY SIM
Fluorene		3.4	0.19	0.028	ug/l	SW846 8270D BY SIM
Naphthalene		0.30 JB	3.8	0.015	ug/l	SW846 8270D BY SIM
Phenanthrene		1.5	0.094	0.020	ug/l	SW846 8270D BY SIM
Pyrene		0.057 J	0.19	0.016	ug/l	SW846 8270D BY SIM
C11-C22 Aromatics (Unadj.)		214	94	66	ug/l	MADEP EPH REV 1.1
C9-C18 Aliphatics		69.1 J	94	66	ug/l	MADEP EPH REV 1.1
C11-C22 Aromatics		205	94	66	ug/l	MADEP EPH REV 1.1
MC43503-15	**AOC9-SB2-MW2**					
Acenaphthene		0.16 J	0.19	0.014	ug/l	SW846 8270D BY SIM
Anthracene		0.043 J	0.19	0.018	ug/l	SW846 8270D BY SIM

Summary of Hits

Job Number: MC43503
Account: CB&I
Project: NRG Middletown, 1866 River Road, Middletown, CT
Collected: 12/10/15 thru 12/11/15

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Fluoranthene		0.036 J	0.19	0.014	ug/l	SW846 8270D BY SIM
Fluorene		0.082 J	0.19	0.028	ug/l	SW846 8270D BY SIM
Naphthalene		0.14 JB	3.8	0.015	ug/l	SW846 8270D BY SIM
Pyrene		0.033 J	0.19	0.016	ug/l	SW846 8270D BY SIM
Arsenic		15.0	4.0	1.7	ug/l	SW846 6010C
Zinc		15.8 B	20	1.0	ug/l	SW846 6010C

New England ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: TW-10
Lab Sample ID: MC43503-1
Matrix: AQ - Ground Water
Project: NRG Middletown, 1866 River Road, Middletown, CT

Date Sampled: 12/10/15
Date Received: 12/15/15
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Lead	1.7 U	5.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Selenium	2.0 U	10	2.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Vanadium	5.0 B	10	0.51	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Zinc	5.5 B	20	1.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18774
(2) Prep QC Batch: MP25623

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: TW-14
Lab Sample ID: MC43503-2
Matrix: AQ - Ground Water
Project: NRG Middletown, 1866 River Road, Middletown, CT

Date Sampled: 12/10/15
Date Received: 12/15/15
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Lead	1.7 U	5.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Selenium	2.0 U	10	2.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Vanadium	2.2 B	10	0.51	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Zinc	2.4 B	20	1.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18774
(2) Prep QC Batch: MP25623

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: EB-1
Lab Sample ID: MC43503-3
Matrix: AQ - Equipment Blank
Method: SW846 8270D BY SIM SW846 3510C
Project: NRG Middletown, 1866 River Road, Middletown, CT

Date Sampled: 12/10/15
Date Received: 12/15/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I99579.D	1	12/24/15	MR	12/16/15	OP45788	MSI3723
Run #2							

	Initial Volume	Final Volume
Run #1	1070 ml	2.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.19	0.014	ug/l	
208-96-8	Acenaphthylene	ND	0.19	0.016	ug/l	
120-12-7	Anthracene	ND	0.19	0.018	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.094	0.044	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.19	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.094	0.036	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.19	0.023	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.19	0.019	ug/l	
218-01-9	Chrysene	ND	0.19	0.025	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.19	0.028	ug/l	
206-44-0	Fluoranthene	ND	0.19	0.014	ug/l	
86-73-7	Fluorene	ND	0.19	0.028	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.19	0.038	ug/l	
91-57-6	2-Methylnaphthalene	ND	3.8	0.021	ug/l	
91-20-3	Naphthalene	0.17	3.8	0.015	ug/l	JB
85-01-8	Phenanthrene	ND	0.094	0.020	ug/l	
129-00-0	Pyrene	ND	0.19	0.016	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	0% [a]		26-121%
321-60-8	2-Fluorobiphenyl	67%		28-107%
1718-51-0	Terphenyl-d14	0% [a]		29-129%

(a) Surrogate standard not added. EPH extract analyzed.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: EB-1
Lab Sample ID: MC43503-3
Matrix: AQ - Equipment Blank
Method: MADEP EPH REV 1.1 SW846 3510C
Project: NRG Middletown, 1866 River Road, Middletown, CT

Date Sampled: 12/10/15
Date Received: 12/15/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE12779.D	1	12/22/15	TA	12/16/15	OP45787	GDE709
Run #2							

	Initial Volume	Final Volume
Run #1	1070 ml	2.0 ml
Run #2		

Extractable TPHC Ranges

CAS No.	Compound	Result	RL	MDL	Units	Q
	C11-C22 Aromatics (Unadj.)	ND	94	66	ug/l	
	C9-C18 Aliphatics	ND	94	66	ug/l	
	C19-C36 Aliphatics	ND	94	66	ug/l	
	C11-C22 Aromatics	ND	94	66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	46%		40-140%
321-60-8	2-Fluorobiphenyl	73%		40-140%
3386-33-2	1-Chlorooctadecane	67%		40-140%
580-13-2	2-Bromonaphthalene	73%		40-140%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: EB-1
Lab Sample ID: MC43503-3
Matrix: AQ - Equipment Blank
Project: NRG Middletown, 1866 River Road, Middletown, CT

Date Sampled: 12/10/15
Date Received: 12/15/15
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Lead	1.7 U	5.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Selenium	2.0 U	10	2.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Vanadium	0.51 U	10	0.51	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Zinc	1.5 B	20	1.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18774
(2) Prep QC Batch: MP25623

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: AOC1-MW2
Lab Sample ID: MC43503-4
Matrix: AQ - Ground Water
Project: NRG Middletown, 1866 River Road, Middletown, CT

Date Sampled: 12/10/15
Date Received: 12/15/15
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	1.7 B	4.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Lead	1.7 U	5.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Selenium	2.0 U	10	2.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Vanadium	0.51 U	10	0.51	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Zinc	1.1 B	20	1.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18774
(2) Prep QC Batch: MP25623

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: AOC1-MW1R
Lab Sample ID: MC43503-5
Matrix: AQ - Ground Water
Project: NRG Middletown, 1866 River Road, Middletown, CT

Date Sampled: 12/10/15
Date Received: 12/15/15
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Lead	1.7 U	5.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Selenium	8.0 B	10	2.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Vanadium	1.3 B	10	0.51	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Zinc	3.8 B	20	1.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18774
(2) Prep QC Batch: MP25623

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: TW-18
Lab Sample ID: MC43503-6
Matrix: AQ - Ground Water
Project: NRG Middletown, 1866 River Road, Middletown, CT

Date Sampled: 12/10/15
Date Received: 12/15/15
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Lead	1.7 U	5.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Selenium	2.0 U	10	2.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Vanadium	11.0	10	0.51	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Zinc	1.8 B	20	1.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18774
(2) Prep QC Batch: MP25623

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: TW-18 DUP
Lab Sample ID: MC43503-7
Matrix: AQ - Ground Water
Project: NRG Middletown, 1866 River Road, Middletown, CT

Date Sampled: 12/10/15
Date Received: 12/15/15
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Lead	1.7 U	5.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Selenium	2.0 U	10	2.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Vanadium	11.1	10	0.51	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Zinc	1.6 B	20	1.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18774
(2) Prep QC Batch: MP25623

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: TW-17D
Lab Sample ID: MC43503-8
Matrix: AQ - Ground Water
Project: NRG Middletown, 1866 River Road, Middletown, CT

Date Sampled: 12/10/15
Date Received: 12/15/15
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Lead	1.7 U	5.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Selenium	50.3	10	2.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Vanadium	298	10	0.51	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Zinc	3.6 B	20	1.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18774
(2) Prep QC Batch: MP25623

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: TW-21D
Lab Sample ID: MC43503-9
Matrix: AQ - Ground Water
Project: NRG Middletown, 1866 River Road, Middletown, CT

Date Sampled: 12/10/15
Date Received: 12/15/15
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Lead	1.7 U	5.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Selenium	35.9	10	2.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Vanadium	6.8 B	10	0.51	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Zinc	3.0 B	20	1.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18774
(2) Prep QC Batch: MP25623

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	AOC5-MW1		
Lab Sample ID:	MC43503-10	**Date Sampled:**	12/10/15
Matrix:	AQ - Ground Water	**Date Received:**	12/15/15
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	NRG Middletown, 1866 River Road, Middletown, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I99580.D	1	12/24/15	MR	12/16/15	OP45788	MSI3723
Run #2							

	Initial Volume	Final Volume
Run #1	1070 ml	2.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.19	0.014	ug/l	
208-96-8	Acenaphthylene	ND	0.19	0.016	ug/l	
120-12-7	Anthracene	ND	0.19	0.018	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.094	0.044	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.19	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.094	0.036	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.19	0.023	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.19	0.019	ug/l	
218-01-9	Chrysene	ND	0.19	0.025	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.19	0.028	ug/l	
206-44-0	Fluoranthene	ND	0.19	0.014	ug/l	
86-73-7	Fluorene	ND	0.19	0.028	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.19	0.038	ug/l	
91-57-6	2-Methylnaphthalene	ND	3.8	0.021	ug/l	
91-20-3	Naphthalene	0.14	3.8	0.015	ug/l	JB
85-01-8	Phenanthrene	ND	0.094	0.020	ug/l	
129-00-0	Pyrene	ND	0.19	0.016	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	0% [a]		26-121%
321-60-8	2-Fluorobiphenyl	69%		28-107%
1718-51-0	Terphenyl-d14	0% [a]		29-129%

(a) Surrogate standard not added. EPH extract analyzed.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AOC5-MW1		
Lab Sample ID:	MC43503-10	**Date Sampled:**	12/10/15
Matrix:	AQ - Ground Water	**Date Received:**	12/15/15
Method:	MADEP EPH REV 1.1 SW846 3510C	**Percent Solids:**	n/a
Project:	NRG Middletown, 1866 River Road, Middletown, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE12782.D	1	12/22/15	TA	12/16/15	OP45787	GDE709
Run #2							

	Initial Volume	Final Volume
Run #1	1070 ml	2.0 ml
Run #2		

Extractable TPHC Ranges

CAS No.	Compound	Result	RL	MDL	Units	Q
	C11-C22 Aromatics (Unadj.)	ND	94	66	ug/l	
	C9-C18 Aliphatics	ND	94	66	ug/l	
	C19-C36 Aliphatics	ND	94	66	ug/l	
	C11-C22 Aromatics	ND	94	66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	52%		40-140%
321-60-8	2-Fluorobiphenyl	80%		40-140%
3386-33-2	1-Chlorooctadecane	61%		40-140%
580-13-2	2-Bromonaphthalene	81%		40-140%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AOC2-SB1-MW1		
Lab Sample ID:	MC43503-11	**Date Sampled:**	12/10/15
Matrix:	AQ - Ground Water	**Date Received:**	12/15/15
		Percent Solids:	n/a
Project:	NRG Middletown, 1866 River Road, Middletown, CT		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Lead	1.7 U	5.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Selenium	2.0 U	10	2.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Vanadium	0.51 U	10	0.51	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Zinc	1.6 B	20	1.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18774
(2) Prep QC Batch: MP25623

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	AOC9-SB1-MW1		
Lab Sample ID:	MC43503-12	**Date Sampled:**	12/11/15
Matrix:	AQ - Ground Water	**Date Received:**	12/15/15
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	NRG Middletown, 1866 River Road, Middletown, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I99581.D	1	12/24/15	MR	12/16/15	OP45788	MSI3723
Run #2							

	Initial Volume	Final Volume
Run #1	1070 ml	2.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.19	0.014	ug/l	
208-96-8	Acenaphthylene	ND	0.19	0.016	ug/l	
120-12-7	Anthracene	ND	0.19	0.018	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.094	0.044	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.19	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.094	0.036	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.19	0.023	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.19	0.019	ug/l	
218-01-9	Chrysene	ND	0.19	0.025	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.19	0.028	ug/l	
206-44-0	Fluoranthene	ND	0.19	0.014	ug/l	
86-73-7	Fluorene	ND	0.19	0.028	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.19	0.038	ug/l	
91-57-6	2-Methylnaphthalene	ND	3.8	0.021	ug/l	
91-20-3	Naphthalene	0.13	3.8	0.015	ug/l	JB
85-01-8	Phenanthrene	ND	0.094	0.020	ug/l	
129-00-0	Pyrene	ND	0.19	0.016	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	0% [a]		26-121%
321-60-8	2-Fluorobiphenyl	68%		28-107%
1718-51-0	Terphenyl-d14	0% [a]		29-129%

(a) Surrogate standard not added. EPH extract analyzed.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AOC9-SB1-MW1		
Lab Sample ID:	MC43503-12	**Date Sampled:**	12/11/15
Matrix:	AQ - Ground Water	**Date Received:**	12/15/15
Method:	MADEP EPH REV 1.1 SW846 3510C	**Percent Solids:**	n/a
Project:	NRG Middletown, 1866 River Road, Middletown, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE12783.D	1	12/22/15	TA	12/16/15	OP45787	GDE709
Run #2							

	Initial Volume	Final Volume
Run #1	1070 ml	2.0 ml
Run #2		

Extractable TPHC Ranges

CAS No.	Compound	Result	RL	MDL	Units	Q
	C11-C22 Aromatics (Unadj.)	ND	94	66	ug/l	
	C9-C18 Aliphatics	ND	94	66	ug/l	
	C19-C36 Aliphatics	ND	94	66	ug/l	
	C11-C22 Aromatics	ND	94	66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	48%		40-140%
321-60-8	2-Fluorobiphenyl	75%		40-140%
3386-33-2	1-Chlorooctadecane	65%		40-140%
580-13-2	2-Bromonaphthalene	76%		40-140%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AOC9-SB1-MW1		
Lab Sample ID:	MC43503-12	**Date Sampled:**	12/11/15
Matrix:	AQ - Ground Water	**Date Received:**	12/15/15
		Percent Solids:	n/a
Project:	NRG Middletown, 1866 River Road, Middletown, CT		

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	1.7 B	4.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18774
(2) Prep QC Batch: MP25623

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	AOC8-SB1-MW1		
Lab Sample ID:	MC43503-13	**Date Sampled:**	12/11/15
Matrix:	AQ - Ground Water	**Date Received:**	12/15/15
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	NRG Middletown, 1866 River Road, Middletown, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I99582.D	1	12/24/15	MR	12/16/15	OP45788	MSI3723
Run #2							

	Initial Volume	Final Volume
Run #1	1060 ml	2.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	1.6	0.19	0.014	ug/l	
208-96-8	Acenaphthylene	0.27	0.19	0.016	ug/l	
120-12-7	Anthracene	ND	0.19	0.018	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.094	0.045	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.19	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.094	0.036	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.19	0.024	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.19	0.019	ug/l	
218-01-9	Chrysene	ND	0.19	0.025	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.19	0.028	ug/l	
206-44-0	Fluoranthene	0.029	0.19	0.014	ug/l	J
86-73-7	Fluorene	3.2	0.19	0.028	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.19	0.038	ug/l	
91-57-6	2-Methylnaphthalene	ND	3.8	0.021	ug/l	
91-20-3	Naphthalene	0.42	3.8	0.015	ug/l	JB
85-01-8	Phenanthrene	1.2	0.094	0.020	ug/l	
129-00-0	Pyrene	0.078	0.19	0.016	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	0% [a]		26-121%
321-60-8	2-Fluorobiphenyl	65%		28-107%
1718-51-0	Terphenyl-d14	0% [a]		29-129%

(a) Surrogate standard not added. EPH extract analyzed.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AOC8-SB1-MW1		
Lab Sample ID:	MC43503-13	**Date Sampled:**	12/11/15
Matrix:	AQ - Ground Water	**Date Received:**	12/15/15
Method:	MADEP EPH REV 1.1 SW846 3510C	**Percent Solids:**	n/a
Project:	NRG Middletown, 1866 River Road, Middletown, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE12784.D	1	12/22/15	TA	12/16/15	OP45787	GDE709
Run #2							

	Initial Volume	Final Volume
Run #1	1060 ml	2.0 ml
Run #2		

Extractable TPHC Ranges

CAS No.	Compound	Result	RL	MDL	Units	Q
	C11-C22 Aromatics (Unadj.)	270	94	66	ug/l	
	C9-C18 Aliphatics	80.7	94	66	ug/l	J
	C19-C36 Aliphatics	ND	94	66	ug/l	
	C11-C22 Aromatics	256	94	66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	60%		40-140%
321-60-8	2-Fluorobiphenyl	79%		40-140%
3386-33-2	1-Chlorooctadecane	69%		40-140%
580-13-2	2-Bromonaphthalene	82%		40-140%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AOC8-SB1-MW1 DUP
Lab Sample ID: MC43503-14
Matrix: AQ - Ground Water
Method: SW846 8270D BY SIM SW846 3510C
Project: NRG Middletown, 1866 River Road, Middletown, CT

Date Sampled: 12/11/15
Date Received: 12/15/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I99583.D	1	12/24/15	MR	12/16/15	OP45788	MSI3723
Run #2							

	Initial Volume	Final Volume
Run #1	1070 ml	2.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	1.4	0.19	0.014	ug/l	
208-96-8	Acenaphthylene	0.23	0.19	0.016	ug/l	
120-12-7	Anthracene	ND	0.19	0.018	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.094	0.044	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.19	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.094	0.036	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.19	0.023	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.19	0.019	ug/l	
218-01-9	Chrysene	ND	0.19	0.025	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.19	0.028	ug/l	
206-44-0	Fluoranthene	ND	0.19	0.014	ug/l	
86-73-7	Fluorene	3.4	0.19	0.028	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.19	0.038	ug/l	
91-57-6	2-Methylnaphthalene	ND	3.8	0.021	ug/l	
91-20-3	Naphthalene	0.30	3.8	0.015	ug/l	JB
85-01-8	Phenanthrene	1.5	0.094	0.020	ug/l	
129-00-0	Pyrene	0.057	0.19	0.016	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	0% [a]		26-121%
321-60-8	2-Fluorobiphenyl	65%		28-107%
1718-51-0	Terphenyl-d14	0% [a]		29-129%

(a) Surrogate standard not added. EPH extract analyzed.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AOC8-SB1-MW1 DUP
Lab Sample ID: MC43503-14
Matrix: AQ - Ground Water
Method: MADEP EPH REV 1.1 SW846 3510C
Project: NRG Middletown, 1866 River Road, Middletown, CT

Date Sampled: 12/11/15
Date Received: 12/15/15
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE12785.D	1	12/22/15	TA	12/16/15	OP45787	GDE709
Run #2							

	Initial Volume	Final Volume
Run #1	1070 ml	2.0 ml
Run #2		

Extractable TPHC Ranges

CAS No.	Compound	Result	RL	MDL	Units	Q
	C11-C22 Aromatics (Unadj.)	214	94	66	ug/l	
	C9-C18 Aliphatics	69.1	94	66	ug/l	J
	C19-C36 Aliphatics	ND	94	66	ug/l	
	C11-C22 Aromatics	205	94	66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	55%		40-140%
321-60-8	2-Fluorobiphenyl	76%		40-140%
3386-33-2	1-Chlorooctadecane	74%		40-140%
580-13-2	2-Bromonaphthalene	79%		40-140%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AOC9-SB2-MW2		
Lab Sample ID:	MC43503-15	**Date Sampled:**	12/11/15
Matrix:	AQ - Ground Water	**Date Received:**	12/15/15
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	NRG Middletown, 1866 River Road, Middletown, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I99584.D	1	12/24/15	MR	12/16/15	OP45788	MSI3723
Run #2							

	Initial Volume	Final Volume
Run #1	1070 ml	2.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.16	0.19	0.014	ug/l	J
208-96-8	Acenaphthylene	ND	0.19	0.016	ug/l	
120-12-7	Anthracene	0.043	0.19	0.018	ug/l	J
56-55-3	Benzo(a)anthracene	ND	0.094	0.044	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.19	0.029	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.094	0.036	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.19	0.023	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.19	0.019	ug/l	
218-01-9	Chrysene	ND	0.19	0.025	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.19	0.028	ug/l	
206-44-0	Fluoranthene	0.036	0.19	0.014	ug/l	J
86-73-7	Fluorene	0.082	0.19	0.028	ug/l	J
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.19	0.038	ug/l	
91-57-6	2-Methylnaphthalene	ND	3.8	0.021	ug/l	
91-20-3	Naphthalene	0.14	3.8	0.015	ug/l	JB
85-01-8	Phenanthrene	ND	0.094	0.020	ug/l	
129-00-0	Pyrene	0.033	0.19	0.016	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	0% [a]		26-121%
321-60-8	2-Fluorobiphenyl	71%		28-107%
1718-51-0	Terphenyl-d14	0% [a]		29-129%

(a) Surrogate standard not added. EPH extract analyzed.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	AOC9-SB2-MW2		
Lab Sample ID:	MC43503-15	**Date Sampled:**	12/11/15
Matrix:	AQ - Ground Water	**Date Received:**	12/15/15
Method:	MADEP EPH REV 1.1 SW846 3510C	**Percent Solids:**	n/a
Project:	NRG Middletown, 1866 River Road, Middletown, CT		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	DE12786.D	1	12/22/15	TA	12/16/15	OP45787	GDE709
Run #2							

	Initial Volume	Final Volume
Run #1	1070 ml	2.0 ml
Run #2		

Extractable TPHC Ranges

CAS No.	Compound	Result	RL	MDL	Units	Q
	C11-C22 Aromatics (Unadj.)	ND	94	66	ug/l	
	C9-C18 Aliphatics	ND	94	66	ug/l	
	C19-C36 Aliphatics	ND	94	66	ug/l	
	C11-C22 Aromatics	ND	94	66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	55%		40-140%
321-60-8	2-Fluorobiphenyl	72%		40-140%
3386-33-2	1-Chlorooctadecane	60%		40-140%
580-13-2	2-Bromonaphthalene	74%		40-140%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: AOC9-SB2-MW2
Lab Sample ID: MC43503-15
Matrix: AQ - Ground Water
Project: NRG Middletown, 1866 River Road, Middletown, CT

Date Sampled: 12/11/15
Date Received: 12/15/15
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	15.0	4.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Lead	1.7 U	5.0	1.7	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Selenium	2.0 U	10	2.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Vanadium	0.51 U	10	0.51	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]
Zinc	15.8 B	20	1.0	ug/l	1	12/18/15	12/21/15	EC	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA18774
(2) Prep QC Batch: MP25623

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

New England ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- RCP Form
- Sample Tracking Chronicle
- QC Evaluation: CT RCP Limits

ACCUTEST LABORATORIES

CHAIN OF CUSTODY

Accutest Laboratories of New England
495 Technology Center West, Building One
TEL. 508-481-6200 FAX: 508-481-7753
www.accutest.com

PAGE 1 OF 2

FED-EX Tracking #: | Bottle Order Control #:
Accutest Quote #: | Accutest Job #: MC43503

Client / Reporting Information
- Company Name: CB&I Environmental
- Street Address: 150 Royall Street
- City / State / Zip: Canton, MA 02021
- Project Contact / E-mail: Raymond.Cadorette@cbi.com
- Phone #: 617-589-6102 Fax #:
- Sampler(s) Name(s) / Phone #: Daniel Leahy 617-212-8276

Project Information
- Project Name: NRG Middletown
- Street: River Road
- City: Middletown, CT
- Project#: 1009634028-00121110
- Client PO#: 948165
- Project Manager: Andrew Walker

Billing Information (If different from Report to)
- Company Name:
- Street Address:
- City / State / Zip:
- Attention: NRG ACCOUNT PRICING PO#:

Matrix Codes: DW - Drinking Water, GW - Ground Water, WW - Water, SW - Surface Water, SO - Soil, SL - Sludge, SED - Sediment, OI - Oil, LIQ - Other Liquid, AIR - Air, SOL - Other Solid, WP - Wipe, FB - Field Blank, EB - Equipment Blank, RB - Rinse Blank, TB - Trip Blank

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Date	Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Bisulfate	Total Metals (As,Pb,Se,V,Zn) EPA 6010C	Total Arsenic	~~EPH (MADEP Method)~~	PAH by EPA 8270 (SIM) including 2-methylnaphthalene	~~EPH (MADEP)~~	LAB USE ONLY
-1	TW-10		12/10/15	0815	DL	GW	1			1							1					
-2	TW-14		12/10/15	0905	↓	↓	1			1							1					
-3	EB-1		12/10/15	0740	↓	LW	3	2		1		~~1~~					1			2	~~1~~	
-4	AOC1-MW2		12/10/15	0945	↓	GW	1			1							1					
-5	AOC1-MW1R		12/10/15	1030	↓	↓	1			1							1					
-6	TW-18		12/10/15	1120	↓	↓	1			1							1					
-7	TW-18 DUP		12/10/15	1120	↓	↓	1			1							1					
-8	TW-17D		12/10/15	1225	↓	↓	1			1							1					18C
-9	TW-21D		12/10/15	1320	↓	↓	1			1							1					6B
-10	AOC5-MW1		12/10/15	1405	↓	↓	2	2												2	~~1~~	
-11	AOC2-SB1-MW1		12/10/15	1500	↓	↓	1			1							1					

Turnaround Time (Business days)
- [x] Std. 10 Business Days
- [ ] Std. 5 Business Days (By Contract only)
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*

Approved By (Accutest PM): / Date:

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information
- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [x] CT RCP
- [ ] MA MCP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [x] EDD Format GISKey
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary

Comments / Special Instructions
QA/QC: CTDEEP RCP
Detection limits must meet CT SWPC.
Report metals to MDL.
Refer to site specific QAPP.
Email GISKey formatted EDD & PDF to:
Catherine.Joe@CBI.com.
* RUN PAH AS EXTRACT AS PER LAB

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	12/11/15 1500	1 V. Sasso	2 V. Sasso	12/15/15	2
Relinquished by Sampler: 3 [signature]	Date Time: 12/15/15	Received By: 3 [signature]	Relinquished By: 4	Date Time:	Received By: 4 12/17/15 9P
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	☐ Intact ☐ Not intact	Preserved where applicable ☐ IRGUN1 On Ice ☑ Cooler Temp. 1.0C

REVISED

MC43503: Chain of Custody
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CHAIN OF CUSTODY

ACCUTEST LABORATORIES

Accutest Laboratories of New England
495 Technology Center West, Building One
TEL. 508-481-6200 FAX: 508-481-7753
www.accutest.com

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FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job # MC43503

Client / Reporting Information		Project Information	
Company Name: CB&I Environmental		Project Name: NRG Middletown	
Street Address: 150 Royall Street		Street: River Road	Billing Information (If different from Report to)
City, State, Zip: Canton, MA 02021		City: Middletown, CT	Company Name:
Project Contact / E-mail: Raymond.Cadorette@cbi.com		Project #: 1009634028-00121110	Street Address:
Phone #: 617-589-6102	Fax #:	Client PO#: 948165	City / State / Zip:
Sampler(s) Name(s) / Phone #: Daniel Leahy 617-212-8276		Project Manager: Andrew Walker	Attention: NRG ANNUAL PRICING / PO#:

Requested Analysis (see TEST CODE sheet): Total Metals (As, Pb, Se, V, Zn); Total Arsenic; EPH (MADEP method) + PAH; PAH by EPA 8270 (SIM) including 2-methylnaphthalene

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Date	Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Total Metals	Total Arsenic	EPH + PAH / PAH 8270	LAB USE ONLY
-12	AOC9-SB1-MW1		12/11/15	0810	DL	GW	3	2		1							1	2	
-13	AOC8-SB1-MW1		12/11/15	0930	DL	GW	2	2										2	
-14	AOC8-SB1-MW1		12/11/15	0930	DL	GW	2	2										2	
-15	AOC9-SB2-MW2		12/11/15	1045	DL	GW	3	2		1						1		2	

This entry corrected to read "AOC8-SB1-MW1-DUP" A.Steele 12/17/2015

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED - Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB - Equipment Blank; RB - Rinse Blank; TB - Trip Blank

Turnaround Time (Business days)
- [x] Std. 10 Business Days
- [ ] Std. 5 Business Days (By Contract only)
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Approved By (Accutest PM) / Date:

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information
- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [x] CT RCP
- [ ] MA MCP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [x] EDD Format GISKey
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary

Comments / Special Instructions
QA/QC: CTDEEP RCP
Detection limits must meet CT SWPC.
Report metals to MDL.
Refer to site specific QAPP
Email GISKey formatted EDD & PDF to: Catherine.Joe@cbi.com
* RUN PAH AS EXTRACT AS PER LIE

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	12/11/15 1500	1	2		2
Relinquished by Sampler: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	☐ Intact ☐ Not intact / Preserved where applicable ☐	On Ice ☐ / Cooler Temp.

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ACCUTEST LABORATORIES

CHAIN OF CUSTODY

Accutest Laboratories of New England
495 Technology Center West, Building One
TEL. 508-481-6200 FAX: 508-481-7753
www.accutest.com

PAGE 1 OF 2

FED-EX Tracking # | Bottle Order Control #
Accutest Quote # | Accutest Job # MC43503

Client / Reporting Information
Company Name: CB&I Environmental
Street Address: 150 Royall Street
City, State, Zip: Canton, MA 02021
Project Contact / E-mail: Raymond.Cadorette@cbi.com
Phone #: 617-589-6102
Sampler(s) Name(s) / Phone #: Daniel Leahy 617-212-8276

Project Information
Project Name: NRG Middletown
Street: River Road
City: Middletown, CT
Project#: 1009634028-00121110
Client PO#: 948165
Project Manager: Andrew Walker

Billing Information (If different from Report to)
Company Name:
Street Address:
City / State / Zip:
Attention: NRG ACCOUNT PRICING PO#

Requested Analysis (see TEST CODE sheet): Total Metals (As,Pb,Se,V,Zn) EPA 6010C; Total Arsenic; ~~EPH (MADEP Method)~~ + ~~EPH (MADEP Method)~~; PAH by EPA 8270 (SIM) including 2-methylnaphthalene; ~~EPH (MADEP method)~~

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Date	Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Bisulfate	Total Metals	Total Arsenic	EPH	PAH	EPH	LAB USE ONLY
-1	TW-10		12/10/15	0815	DL	GW	1			1							1					
-2	TW-14		12/10/15	0905	↓	↓	1			1							1					
-3	EB-1		12/10/15	0740		LW	3	2		1		~~2~~					1			2	~~2~~	
-4	AOC-MW2		12/10/15	0945		GW	1			1							1					
-5	AOC1-MW1R		12/10/15	1030			1			1							1					
-6	TW-18		12/10/15	1120			1			1							1					
-7	TW-18 DUP		12/10/15	1120			1			1							1					
-8	TW-17D		12/10/15	1225			1			1							1					18C
-9	TW-21D		12/10/15	1320			1			1							1					6B
-10	AOC5-MW1		12/10/15	1405			2	2												2	~~2~~	
-11	AOC2-SB1-MW1		12/10/15	1500	↓	↓	1			1							1					

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED - Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB - Equipment Blank; RB - Rinse Blank; TB - Trip Blank

Turnaround Time (Business days)
- [x] Std. 10 Business Days
- [ ] Std. 5 Business Days (By Contract only)
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Approved By (Accutest PM): / Date:

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information
- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [x] CT RCP
- [ ] MA MCP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [x] EDD Format GISKey
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary

Comments / Special Instructions
QA/QC: CTDEEP RCP
Detection limits must meet CT SWPC.
Report metals to MDL.
Refer to site specific QAPP.
Email GISKey formatted EDD & PDF to:
Catherine.Joe@CBI.com.
* RUN PAH AS EXTRACT AS PER LAB

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	12/11/15 1500	1 V. Sasso	2 V. Sasso	12/15/15	2 [signature]
3 Relinquished by Sampler: [signature]	12/15/15 10:45	3 [signature]	4		4
5 Relinquished by:	Date Time:	5 Received By:	Custody Seal # ☐ Intact ☐ Not intact	Preserved where applicable ☐ IN6UN1	On Ice ☑ Cooler Temp. 1.0C

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MC43503: Chain of Custody
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CHAIN OF CUSTODY

ACCUTEST LABORATORIES

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495 Technology Center West, Building One
TEL. 508-481-6200 FAX: 508-481-7753
www.accutest.com

PAGE 2 OF 2

FED-EX Tracking # | Bottle Order Control #
Accutest Quote # | Accutest Job # MC43503

Client / Reporting Information

- Company Name: CB&I Environmental
- Street Address: 150 Royall Street
- City, State, Zip: Canton, MA 02021
- Project Contact / E-mail: Raymond.Cadorette@cbi.com
- Phone #: 617-589-6102
- Fax #:
- Sampler(s) Name(s) / Phone #: Daniel Leahy 617-212-8276

Project Information

- Project Name: NRG Middletown
- Street: River Road
- City: Middletown, CT
- Project#: 1009634028-00121110
- Client PO#: 948165
- Project Manager: Andrew Walker

Billing Information (If different from Report to)

- Company Name:
- Street Address:
- City / State / Zip:
- Attention: NRG ACCOUNT PRICING
- PO#:

Requested Analysis (see TEST CODE sheet): Total Metals (As, Pb, Se, V, Zn) EPA 6010C; Total Arsenic; EPH (MADEP Method) + PAH by EPA 8270 (SIM) including 2-methylnaphthalene, struck through and amended by hand to ETPH (CTDEP Method) and EPH (MADEP Method)

Matrix Codes: DW - Drinking Water, GW - Ground Water, WW - Water, SW - Surface Water, SO - Soil, SL - Sludge, SED - Sediment, OI - Oil, LIQ - Other Liquid, AIR - Air, SOL - Other Solid, WP - Wipe, FB - Field Blank, EB - Equipment Blank, RB - Rinse Blank, TB - Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Date	Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Bisulfate	Total Metals	Total Arsenic	ETPH (CTDEP)	EPH + PAH	EPH (MADEP)	LAB USE ONLY
-12	AOC9-SB1-MW1		12/11/15	0810	DL	GW	3	2		1								1		2		
-13	AOC8-SB1-MW1		12/11/15	0930	↓	↓	2	2												2		
-14	AOC8-SB1-MW1		12/11/15	0930	↓	↓	2	2												2		DUP
-15	AOC9-SB2-MW2		12/11/15	1045	↓	↓	3	2		1							1			2		

Turnaround Time (Business days)

- [X] Std. 10 Business Days
- [ ] Std. 5 Business Days (By Contract only)
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Approved By (Accutest PM): / Date:

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [X] CT RCP
- [ ] MA MCP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [X] EDD Format GISKey
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary

Comments / Special Instructions

QA/QC: CTDEEP RCP
Detection limits must meet CT SWPC.
Report metals to MDL.
Refer to site specific QAPP.
Email GISKey formatted EDD & PDF to:
Catherine.Joe@cbi.com.
* RUN PAH AS EXTRACT AS PER LAB (DL)

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler: 1 [signature]	Date Time: 12/11/15 1500	Received By: 1 T. Sasso	Relinquished By: 2 T. Sasso	Date Time: 12/15/15	Received By: 2 [signature]
Relinquished by Sampler: 3 [signature]	Date Time: 12/15/15 16:45	Received By: 3 [signature]	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	☐ Intact ☐ Not intact	Preserved where applicable ☐ ER60W1; On Ice ☑; Cooler Temp. 1.0 C

MC43503: Chain of Custody
Page 4 of 6

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Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC43503 **Client:** CBI **Immediate Client Services Action Required:** No

Date / Time Received: 12/15/2015 4:48:00 PM **Delivery Method:** Accutest Courier

Project: NRG MIDDLETOWN **No. Coolers:** 1 **Airbill #'s:**

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:			
3. Cooler media:	Ice (Bag)		

Quality Control Preservation	Y	N	N/A
1. Trip Blank present / cooler:	☐	☐	
2. Trip Blank listed on COC:	☐	☐	
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☐	☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☐		☑

Sample Integrity - Condition	Y	or	N
1. Sample rec'd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume rec'd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

-#14-COC "AOC8-SB1-MW-1, 12/11/15,9:30 time" doesn't match sample labels "AOC8-SB1-MW1 DUP,12/11/15,9:30 time.

Accutest Laboratories
V:508.481.6200

495 Technology Center West, Bldg One
F: 508.481.7753

Marlborough, MA
www/accutest.com

MC43503: Chain of Custody
Page 5 of 6

Sample Receipt Summary - Problem Resolution

Accutest Job Number: MC43503

CSR: Frank D'Agostino **Response Date:** 12/17/2015

Response: See the revised coc

Accutest Laboratories
V:508.481.6200

495 Technology Center West, Bldg One
F: 508.481.7753

Marlborough, MA
www/accutest.com

MC43503: Chain of Custody
Page 6 of 6

Reasonable Confidence Protocol
Laboratory Analysis
QA/QC Certification Form

Laboratory Name: **Accutest New England** **Client:** **CB&I**

Project Location: **NRG Middletown, 1866 River Road, Middletown, CT** **Project Number:** **1009634022-02**

Sampling Date(s): **12/10/2015**

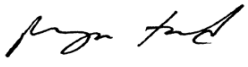
Laboratory Sample ID(s): MC43503-1, MC43503-2, MC43503-3, MC43503-4, MC43503-5, MC43503-6, MC43503-7, MC43503-8, MC43503-9, MC43503-10, MC43503-11, MC43503-12, MC43503-13, MC43503-14, MC43503-15

Methods: MADEP EPH REV 1.1, SW846 6010C, SW846 8270D BY SIM

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CTDEP method-specific Reasonable Confidence Protocol documents)?	Yes ☑ No ☐
1A	Where all the method specified preservation and holding time requirements met?	Yes ☑ No ☐
1B	VPH and EPH mehods only: Was the VPH or EPH method conducted without significant modifications (See section 11.3 of respective methods)	Yes ☑ No ☐ NA ☐
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	Yes ☑ No ☐
3	Were samples received at an appropriate temperature (<6° C)?	Yes ☑ No ☐
4	Were all QA/QC performance criteria specified in the CTDEP Reasonable Confidence Protocol documents achieved?	Yes ☑ No ☐
5	a) Were reporting limits specified or referenced on the chain-of-custody?	Yes ☑ No ☐
	b) Were these reporting limits met?	Yes ☑ No ☐
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	Yes ☐ No ☑
7	Are project-specific matrix spikes and laboratory duplicates included in this data set?	Yes ☐ No ☑

Note: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence".

I, the undersigned, attest under pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete.

Authorized Signature:  Position: Lab Director

Printed Name: Reza Tand Date: 12/30/2015
Accutest New England

Internal Sample Tracking Chronicle

CB&I

Job No: MC43503

NRG Middletown, 1866 River Road, Middletown, CT
Project No: 1009634028-00121110

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC43503-1	Collected: 10-DEC-15 08:15 By: DL TW-10			Received: 15-DEC-15	By: BA	
MC43503-1	SW846 6010C	21-DEC-15 15:42	EC	18-DEC-15	EM	AS,PB,SE,V,ZN
MC43503-2	Collected: 10-DEC-15 09:05 By: DL TW-14			Received: 15-DEC-15	By: BA	
MC43503-2	SW846 6010C	21-DEC-15 16:13	EC	18-DEC-15	EM	AS,PB,SE,V,ZN
MC43503-3	Collected: 10-DEC-15 07:40 By: DL EB-1			Received: 15-DEC-15	By: BA	
MC43503-3	SW846 6010C	21-DEC-15 16:18	EC	18-DEC-15	EM	AS,PB,SE,V,ZN
MC43503-3	MADEP EPH REV 1.1	22-DEC-15 15:27	TA	16-DEC-15	PA	BMAEPHR
MC43503-3	SW846 8270D BY SIM	24-DEC-15 13:04	MR	16-DEC-15	PA	B8270SIMPAH
MC43503-4	Collected: 10-DEC-15 09:45 By: DL AOC1-MW2			Received: 15-DEC-15	By: BA	
MC43503-4	SW846 6010C	21-DEC-15 16:23	EC	18-DEC-15	EM	AS,PB,SE,V,ZN
MC43503-5	Collected: 10-DEC-15 10:30 By: DL AOC1-MW1R			Received: 15-DEC-15	By: BA	
MC43503-5	SW846 6010C	21-DEC-15 16:28	EC	18-DEC-15	EM	AS,PB,SE,V,ZN
MC43503-6	Collected: 10-DEC-15 11:20 By: DL TW-18			Received: 15-DEC-15	By: BA	
MC43503-6	SW846 6010C	21-DEC-15 16:33	EC	18-DEC-15	EM	AS,PB,SE,V,ZN
MC43503-7	Collected: 10-DEC-15 11:20 By: DL TW-18 DUP			Received: 15-DEC-15	By: BA	
MC43503-7	SW846 6010C	21-DEC-15 16:38	EC	18-DEC-15	EM	AS,PB,SE,V,ZN
MC43503-8	Collected: 10-DEC-15 12:25 By: DL TW-17D			Received: 15-DEC-15	By: BA	

Internal Sample Tracking Chronicle

CB&I

Job No: MC43503

NRG Middletown, 1866 River Road, Middletown, CT
Project No: 1009634028-00121110

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC43503-8	SW846 6010C	21-DEC-15 16:43	EC	18-DEC-15	EM	AS,PB,SE,V,ZN
MC43503-9 TW-21D	Collected: 10-DEC-15 13:20 By: DL		Received: 15-DEC-15 By: BA			
MC43503-9	SW846 6010C	21-DEC-15 16:48	EC	18-DEC-15	EM	AS,PB,SE,V,ZN
MC43503-10 AOC5-MW1	Collected: 10-DEC-15 14:05 By: DL		Received: 15-DEC-15 By: BA			
MC43503-10	MADEP EPH REV 1.1	22-DEC-15 16:50	TA	16-DEC-15	PA	BMAEPHR
MC43503-10	SW846 8270D BY SIM	24-DEC-15 13:28	MR	16-DEC-15	PA	B8270SIMPAH
MC43503-11 AOC2-SB1-MW1	Collected: 10-DEC-15 15:00 By: DL		Received: 15-DEC-15 By: BA			
MC43503-11	SW846 6010C	21-DEC-15 15:47	EC	18-DEC-15	EM	AS,PB,SE,V,ZN
MC43503-12 AOC9-SB1-MW1	Collected: 11-DEC-15 08:10 By: DL		Received: 15-DEC-15 By: BA			
MC43503-12	SW846 6010C	21-DEC-15 15:52	EC	18-DEC-15	EM	AS
MC43503-12	MADEP EPH REV 1.1	22-DEC-15 17:17	TA	16-DEC-15	PA	BMAEPHR
MC43503-12	SW846 8270D BY SIM	24-DEC-15 13:54	MR	16-DEC-15	PA	B8270SIMPAH
MC43503-13 AOC8-SB1-MW1	Collected: 11-DEC-15 09:30 By: DL		Received: 15-DEC-15 By: BA			
MC43503-13	MADEP EPH REV 1.1	22-DEC-15 17:45	TA	16-DEC-15	PA	BMAEPHR
MC43503-13	SW846 8270D BY SIM	24-DEC-15 14:19	MR	16-DEC-15	PA	B8270SIMPAH
MC43503-14 AOC8-SB1-MW1 DUP	Collected: 11-DEC-15 09:30 By: DL		Received: 15-DEC-15 By: BA			
MC43503-14	MADEP EPH REV 1.1	22-DEC-15 18:12	TA	16-DEC-15	PA	BMAEPHR
MC43503-14	SW846 8270D BY SIM	24-DEC-15 14:43	MR	16-DEC-15	PA	B8270SIMPAH
MC43503-15 AOC9-SB2-MW2	Collected: 11-DEC-15 10:45 By: DL		Received: 15-DEC-15 By: BA			

Internal Sample Tracking Chronicle

CB&I

Job No: MC43503

NRG Middletown, 1866 River Road, Middletown, CT
Project No: 1009634028-00121110

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC43503-15	SW846 6010C	21-DEC-15 15:58	EC	18-DEC-15	EM	AS,PB,SE,V,ZN
MC43503-15	MADEP EPH REV 1.1	22-DEC-15 18:40	TA	16-DEC-15	PA	BMAEPHR
MC43503-15	SW846 8270D BY SIM	24-DEC-15 15:08	MR	16-DEC-15	PA	B8270SIMPAH

QC Evaluation: CT RCP Limits

Job Number: MC43503
Account: CB&I
Project: NRG Middletown, 1866 River Road, Middletown, CT
Collected: 12/10/15 thru 12/11/15

QC Sample ID	CAS#	Analyte	Sample Type	Result Type	Result	Units	Limits

No Exceptions found.

* Sample used for QC is not from job MC43503

New England ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC43503
Account: FDG CB&I
Project: NRG Middletown, 1866 River Road, Middletown, CT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP45788-MB	I99547.D	1	12/22/15	MR	12/16/15	OP45788	MSI3721

The QC reported here applies to the following samples: **Method:** SW846 8270D BY SIM

MC43503-3, MC43503-10, MC43503-12, MC43503-13, MC43503-14, MC43503-15

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.20	0.015	ug/l	
208-96-8	Acenaphthylene	ND	0.20	0.017	ug/l	
120-12-7	Anthracene	ND	0.20	0.020	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.10	0.047	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	0.030	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.10	0.038	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	0.025	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	0.020	ug/l	
218-01-9	Chrysene	ND	0.20	0.026	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	0.030	ug/l	
206-44-0	Fluoranthene	ND	0.20	0.015	ug/l	
86-73-7	Fluorene	ND	0.20	0.030	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	0.041	ug/l	
91-57-6	2-Methylnaphthalene	ND	4.0	0.022	ug/l	
91-20-3	Naphthalene	0.18	4.0	0.016	ug/l	J
85-01-8	Phenanthrene	ND	0.10	0.022	ug/l	
129-00-0	Pyrene	ND	0.20	0.017	ug/l	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	0%* [a]	26-121%
321-60-8	2-Fluorobiphenyl	76%	28-107%
1718-51-0	Terphenyl-d14	0%* [a]	29-129%

(a) Surrogate standard not added. EPH extract analyzed.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC43503
Account: FDG CB&I
Project: NRG Middletown, 1866 River Road, Middletown, CT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP45788-BS	I99548.D	1	12/22/15	MR	12/16/15	OP45788	MSI3721
OP45788-BSD	I99549.D	1	12/22/15	MR	12/16/15	OP45788	MSI3721

The QC reported here applies to the following samples: **Method:** SW846 8270D BY SIM

MC43503-3, MC43503-10, MC43503-12, MC43503-13, MC43503-14, MC43503-15

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	50	36.7	73	30.9	62	17	45-116/30
208-96-8	Acenaphthylene	50	37.5	75	31.3	63	18	34-110/30
120-12-7	Anthracene	50	41.9	84	40.8	82	3	50-117/30
56-55-3	Benzo(a)anthracene	50	44.1	88	43.8	88	1	55-139/30
50-32-8	Benzo(a)pyrene	50	45.1	90	44.2	88	2	48-131/30
205-99-2	Benzo(b)fluoranthene	50	45.1	90	45.2	90	0	49-141/30
191-24-2	Benzo(g,h,i)perylene	50	42.5	85	42.1	84	1	60-130/30
207-08-9	Benzo(k)fluoranthene	50	36.6	73	35.7	71	2	49-133/30
218-01-9	Chrysene	50	40.6	81	40.3	81	1	52-128/30
53-70-3	Dibenzo(a,h)anthracene	50	44.7	89	44.2	88	1	60-136/30
206-44-0	Fluoranthene	50	40.0	80	39.3	79	2	46-132/30
86-73-7	Fluorene	50	40.6	81	35.5	71	13	53-120/30
193-39-5	Indeno(1,2,3-cd)pyrene	50	45.7	91	45.2	90	1	57-134/30
91-57-6	2-Methylnaphthalene	50	34.5	69	27.9	56	21	36-111/30
91-20-3	Naphthalene	50	30.0	60	23.6	47	24	32-116/30
85-01-8	Phenanthrene	50	39.2	78	36.7	73	7	50-120/30
129-00-0	Pyrene	50	38.7	77	38.1	76	2	48-127/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
4165-60-0	Nitrobenzene-d5	0%* [a]	0%* [a]	26-121%
321-60-8	2-Fluorobiphenyl	67%	65%	28-107%
1718-51-0	Terphenyl-d14	0%* [a]	0%* [a]	29-129%

(a) Surrogate standard not added. EPH extract analyzed.

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC43503
Account: FDG CB&I
Project: NRG Middletown, 1866 River Road, Middletown, CT

Check Std: MSI3721-CC3694 **Injection Date:** 12/22/15
Lab File ID: I99540.D **Injection Time:** 09:27
Instrument ID: GCMSI **Method:** SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	479529	4.32	1383670	5.37	766585	6.92	1255276	8.33	882634	11.10	1730406	12.61
Upper Limit [a]	959058	4.82	2767340	5.87	1533170	7.42	2510552	8.83	1765268	11.60	3460812	13.11
Lower Limit [b]	239765	3.82	691835	4.87	383293	6.42	627638	7.83	441317	10.60	865203	12.11

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP45845-MB	516609	4.32	1496221	5.37	813963	6.92	1320145	8.33	925616	11.10	1838457	12.61
OP45845-BS	512478	4.32	1475994	5.37	789765	6.92	1290627	8.33	883518	11.10	1717988	12.61
OP45845-MS	515895	4.32	1479514	5.37	796835	6.92	1284847	8.33	882276	11.10	1740310	12.61
OP45845-MSD	503472	4.32	1454881	5.37	787099	6.92	1291964	8.33	883888	11.10	1738001	12.61
MC43434-16	526474	4.32	1508909	5.37	824256	6.92	1316819	8.33	933735	11.10	1885792	12.61
ZZZZZZ	494138	4.32	1411246	5.37	760174	6.92	1210172	8.33	863523	11.09	1733216	12.61
OP45788-MB	519778	4.31	1502320	5.37	839971	6.92	1368471	8.33	1014333	11.10	1972132	12.61
OP45788-BS	577330	4.31	1670884	5.37	932644	6.92	1512448	8.33	1083138	11.10	2115858	12.61
OP45788-BSD	610636	4.31	1767521	5.37	990101	6.92	1605355	8.33	1152124	11.10	2247835	12.61
ZZZZZZ	551557	4.31	1630528	5.37	917462	6.92	1483204	8.33	1081972	11.10	2027926	12.61

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Internal Standard Area Summary

Job Number: MC43503
Account: FDG CB&I
Project: NRG Middletown, 1866 River Road, Middletown, CT

Check Std:	MSI3723-CC3694	**Injection Date:**	12/24/15
Lab File ID:	I99569.D	**Injection Time:**	08:56
Instrument ID:	GCMSI	**Method:**	SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	464271	4.32	1340877	5.37	730234	6.92	1180630	8.33	817248	11.09	1634355	12.60
Upper Limit [a]	928542	4.82	2681754	5.87	1460468	7.42	2361260	8.83	1634496	11.59	3268710	13.10
Lower Limit [b]	232136	3.82	670439	4.87	365117	6.42	590315	7.83	408624	10.59	817178	12.10

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP45761-MB	544929	4.32	1560610	5.37	847821	6.92	1364030	8.33	968942	11.10	1908613	12.61
OP45761-BS	556412	4.32	1585007	5.37	847454	6.92	1381577	8.33	950444	11.10	1841607	12.61
OP45761-BSD	547519	4.32	1554926	5.37	826370	6.92	1354327	8.33	937742	11.10	1841354	12.61
ZZZZZZ	505244	4.32	1446668	5.37	769751	6.92	836759	8.33	794042	11.11	1709753	12.61
ZZZZZZ	538608	4.32	1546361	5.37	833115	6.92	1322496	8.33	922379	11.09	1851337	12.60
ZZZZZZ	550054	4.32	1576183	5.37	860164	6.92	1362660	8.33	948817	11.09	1905025	12.61
OP45874-MB	570708	4.32	1636619	5.37	892367	6.92	1416785	8.33	1008163	11.10	1969624	12.61
OP45874-BS	581132	4.32	1654697	5.37	888284	6.92	1444328	8.33	995572	11.10	1920519	12.61
ZZZZZZ	524414	4.32	1512569	5.37	824149	6.92	1315138	8.33	911033	11.09	1807581	12.60
MC43503-3	632224	4.31	1798383	5.37	985700	6.92	1571598	8.33	1114813	11.09	2123468	12.61
MC43503-10	609026	4.31	1761824	5.37	958048	6.92	1543848	8.33	1070335	11.09	2069811	12.60
MC43503-12	609452	4.31	1767807	5.37	961257	6.92	1541695	8.33	1064806	11.09	2066904	12.61
MC43503-13	654103	4.31	1878536	5.37	1040263	6.92	1613569	8.33	1122381	11.09	2199313	12.61
MC43503-14	662354	4.31	1906366	5.37	1057150	6.92	1648076	8.33	1142522	11.09	2229477	12.61
MC43503-15	621371	4.31	1802704	5.37	962475	6.92	1552146	8.33	1067123	11.09	2060053	12.60

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Surrogate Recovery Summary

Job Number: MC43503
Account: FDG CB&I
Project: NRG Middletown, 1866 River Road, Middletown, CT

Method: SW846 8270D BY SIM **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC43503-3	I99579.D	0* [a]	67	0* [a]
MC43503-10	I99580.D	0* [a]	69	0* [a]
MC43503-12	I99581.D	0* [a]	68	0* [a]
MC43503-13	I99582.D	0* [a]	65	0* [a]
MC43503-14	I99583.D	0* [a]	65	0* [a]
MC43503-15	I99584.D	0* [a]	71	0* [a]
OP45788-BS	I99548.D	0* [a]	67	0* [a]
OP45788-BSD	I99549.D	0* [a]	65	0* [a]
OP45788-MB	I99547.D	0* [a]	76	0* [a]

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	26-121%
S2 = 2-Fluorobiphenyl	28-107%
S3 = Terphenyl-d14	29-129%

(a) Surrogate standard not added. EPH extract analyzed.

New England ACCUTEST LABORATORIES

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC43503
Account: FDG CB&I
Project: NRG Middletown, 1866 River Road, Middletown, CT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP45787-MB	DE12770.D	1	12/22/15	TA	12/16/15	OP45787	GDE709

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

MC43503-3, MC43503-10, MC43503-12, MC43503-13, MC43503-14, MC43503-15

CAS No.	Compound	Result	RL	MDL	Units	Q
	C11-C22 Aromatics (Unadj.)	ND	100	70	ug/l	
	C9-C18 Aliphatics	ND	100	70	ug/l	
	C19-C36 Aliphatics	ND	100	70	ug/l	
	C11-C22 Aromatics	ND	100	70	ug/l	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	55%	40-140%
321-60-8	2-Fluorobiphenyl	111%	40-140%
3386-33-2	1-Chlorooctadecane	69%	40-140%
580-13-2	2-Bromonaphthalene	108%	40-140%

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC43503
Account: FDG CB&I
Project: NRG Middletown, 1866 River Road, Middletown, CT

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP45787-BS	DE12766.D	1	12/22/15	TA	12/16/15	OP45787	GDE709
OP45787-BSD	DE12767.D	1	12/22/15	TA	12/16/15	OP45787	GDE709

The QC reported here applies to the following samples: **Method:** MADEP EPH REV 1.1

MC43503-3, MC43503-10, MC43503-12, MC43503-13, MC43503-14, MC43503-15

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
	C11-C22 Aromatics (Unadj.)	800	708	89	698	87	1	40-140/25
	C9-C18 Aliphatics	300	206	69	195	65	5	40-140/25
	C19-C36 Aliphatics	400	381	95	448	112	16	40-140/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	46%	52%	40-140%
321-60-8	2-Fluorobiphenyl	76%	77%	40-140%
3386-33-2	1-Chlorooctadecane	52%	71%	40-140%
580-13-2	2-Bromonaphthalene	77%	79%	40-140%

Sample	Compound	Col #1	Col #2	Breakthrough	Limit
OP45787-BS	2-Methylnaphthalene	29.2	0.18	0.6%	5.0
OP45787-BS	Naphthalene	30.0	0.52	1.7%	5.0
OP45787-BSD	2-Methylnaphthalene	24.7	0.19	0.8%	5.0
OP45787-BSD	Naphthalene	24.6	0.24	1.0%	5.0

* = Outside of Control Limits.

Semivolatile Surrogate Recovery Summary

Job Number: MC43503
Account: FDG CB&I
Project: NRG Middletown, 1866 River Road, Middletown, CT

Method: MADEP EPH REV 1.1 **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S2 [a]	S3 [b]	S4 [a]
MC43503-3	DE12779.D	46	73	67	73
MC43503-10	DE12782.D	52	80	61	81
MC43503-12	DE12783.D	48	75	65	76
MC43503-13	DE12784.D	60	79	69	82
MC43503-14	DE12785.D	55	76	74	79
MC43503-15	DE12786.D	55	72	60	74
OP45787-BS	DE12766.D	46	76	52	77
OP45787-BSD	DE12767.D	52	77	71	79
OP45787-MB	DE12770.D	55	111	69	108

Surrogate Compounds	Recovery Limits
S1 = o-Terphenyl	40-140%
S2 = 2-Fluorobiphenyl	40-140%
S3 = 1-Chlorooctadecane	40-140%
S4 = 2-Bromonaphthalene	40-140%

(a) Recovery from GC signal #1
(b) Recovery from GC signal #2

New England ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC43503
Account: FDG - CB&I
Project: NRG Middletown, 1866 River Road, Middletown, CT

QC Batch ID: MP25623
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 12/18/15

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	15	28		
Antimony	6.0	.76	2		
Arsenic	4.0	1.3	1.7	-0.60	<4.0
Barium	50	.24	1		
Beryllium	4.0	.18	.25		
Bismuth	50	.9	2.1		
Boron	100	.43	1.1		
Cadmium	4.0	.14	.43		
Calcium	5000	5.3	15		
Chromium	10	.37	.48		
Cobalt	50	.14	.28		
Copper	25	.48	2.4		
Gold	50	.95	1.5		
Iron	100	3.2	17		
Lead	5.0	.56	1.7	-0.10	<5.0
Lithium	500	2	2.5		
Magnesium	5000	22	54		
Manganese	15	.04	1.4		
Molybdenum	100	2	3.6		
Nickel	40	.19	.5		
Palladium	50	1.2	2.6		
Platinum	50	3.8	5.4		
Potassium	5000	40	49		
Selenium	10	1	2	-0.80	<10
Silicon	100	13	30		
Silver	5.0	.6	1		
Sodium	5000	10	77		
Sulfur	50	1.6	4.6		
Strontium	10	.15	.22		
Thallium	5.0	.47	1.7		
Tin	100	.26	.81		
Titanium	50	.38	.51		
Tungsten	100	3.1	22		

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC43503
Account: FDG - CB&I
Project: NRG Middletown, 1866 River Road, Middletown, CT

QC Batch ID: MP25623
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 12/18/15

Metal	RL	IDL	MDL	MB raw	final
Vanadium	10	.36	.51	-0.30	<10
Zinc	20	.096	1	0.30	<20
Zirconium	50	.29	1.2		

Associated samples MP25623: MC43503-1, MC43503-2, MC43503-3, MC43503-4, MC43503-5, MC43503-6, MC43503-7, MC43503-8, MC43503-9, MC43503-11, MC43503-12, MC43503-15

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC43503
Account: FDG - CB&I
Project: NRG Middletown, 1866 River Road, Middletown, CT

QC Batch ID: MP25623
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:		12/18/15				12/18/15			
Metal	BSP Result	Spikelot MPICP7	% Rec	QC Limits	BSD Result	Spikelot MPICP7	% Rec	BSD RPD	QC Limit
Aluminum									
Antimony									
Arsenic	520	500	104.0	80-120	525	500	105.0	1.0	20
Barium	anr								
Beryllium									
Bismuth									
Boron									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Gold									
Iron									
Lead	1020	1000	102.0	80-120	1020	1000	102.0	0.0	20
Lithium									
Magnesium									
Manganese									
Molybdenum									
Nickel									
Palladium									
Platinum									
Potassium									
Selenium	514	500	102.8	80-120	517	500	103.4	0.6	20
Silicon									
Silver									
Sodium	anr								
Sulfur									
Strontium									
Thallium									
Tin									
Titanium									
Tungsten									

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC43503
Account: FDG - CB&I
Project: NRG Middletown, 1866 River Road, Middletown, CT

QC Batch ID: MP25623
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:		12/18/15				12/18/15			
Metal	BSP Result	Spikelot MPICP7	% Rec	QC Limits	BSD Result	Spikelot MPICP7	% Rec	BSD RPD	QC Limit
Vanadium	503	500	100.6	80-120	500	500	100.0	0.6	20
Zinc	501	500	100.2	80-120	498	500	99.6	0.6	20
Zirconium									

Associated samples MP25623: MC43503-1, MC43503-2, MC43503-3, MC43503-4, MC43503-5, MC43503-6, MC43503-7, MC43503-8, MC43503-9, MC43503-11, MC43503-12, MC43503-15

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: MC43503
Account: FDG - CB&I
Project: NRG Middletown, 1866 River Road, Middletown, CT

QC Batch ID: MP25623
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 12/18/15

Metal	MC43534-8 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	0.00	0.00	NC	0-10
Barium	anr			
Beryllium				
Bismuth				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Gold				
Iron				
Lead	0.600	0.00	100.0(a)	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Palladium				
Platinum				
Potassium				
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver				
Sodium	anr			
Sulfur				
Strontium				
Thallium				
Tin				
Titanium				
Tungsten				

SERIAL DILUTION RESULTS SUMMARY

Login Number: MC43503
Account: FDG - CB&I
Project: NRG Middletown, 1866 River Road, Middletown, CT

QC Batch ID: MP25623
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

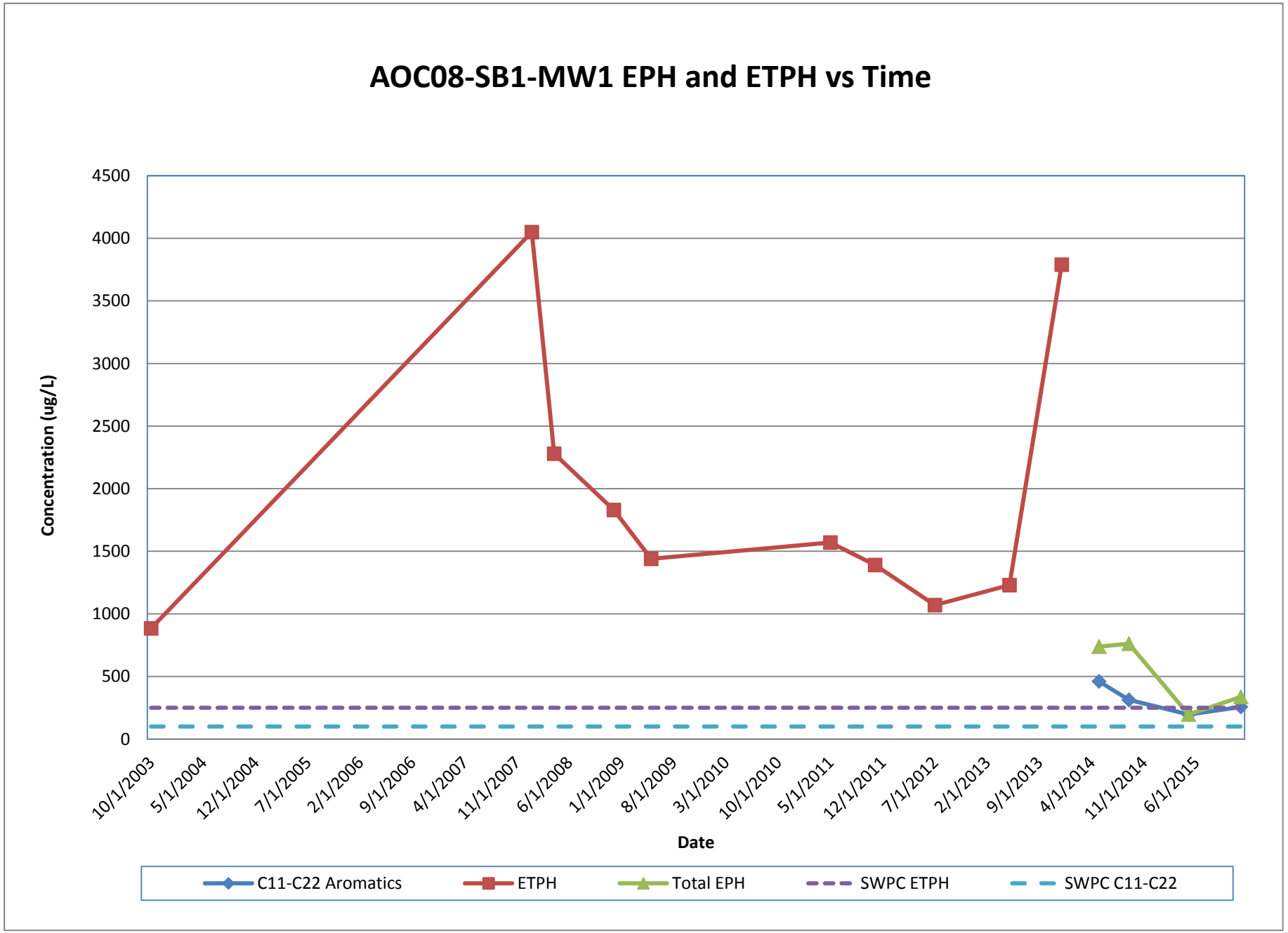
Prep Date: 12/18/15

Metal	MC43534-8 Original	SDL 1:5	%DIF	QC Limits
Vanadium	0.00	0.00	NC	0-10
Zinc	156	159	1.8	0-10
Zirconium				

Associated samples MP25623: MC43503-1, MC43503-2, MC43503-3, MC43503-4, MC43503-5, MC43503-6, MC43503-7, MC43503-8, MC43503-9, MC43503-11, MC43503-12, MC43503-15

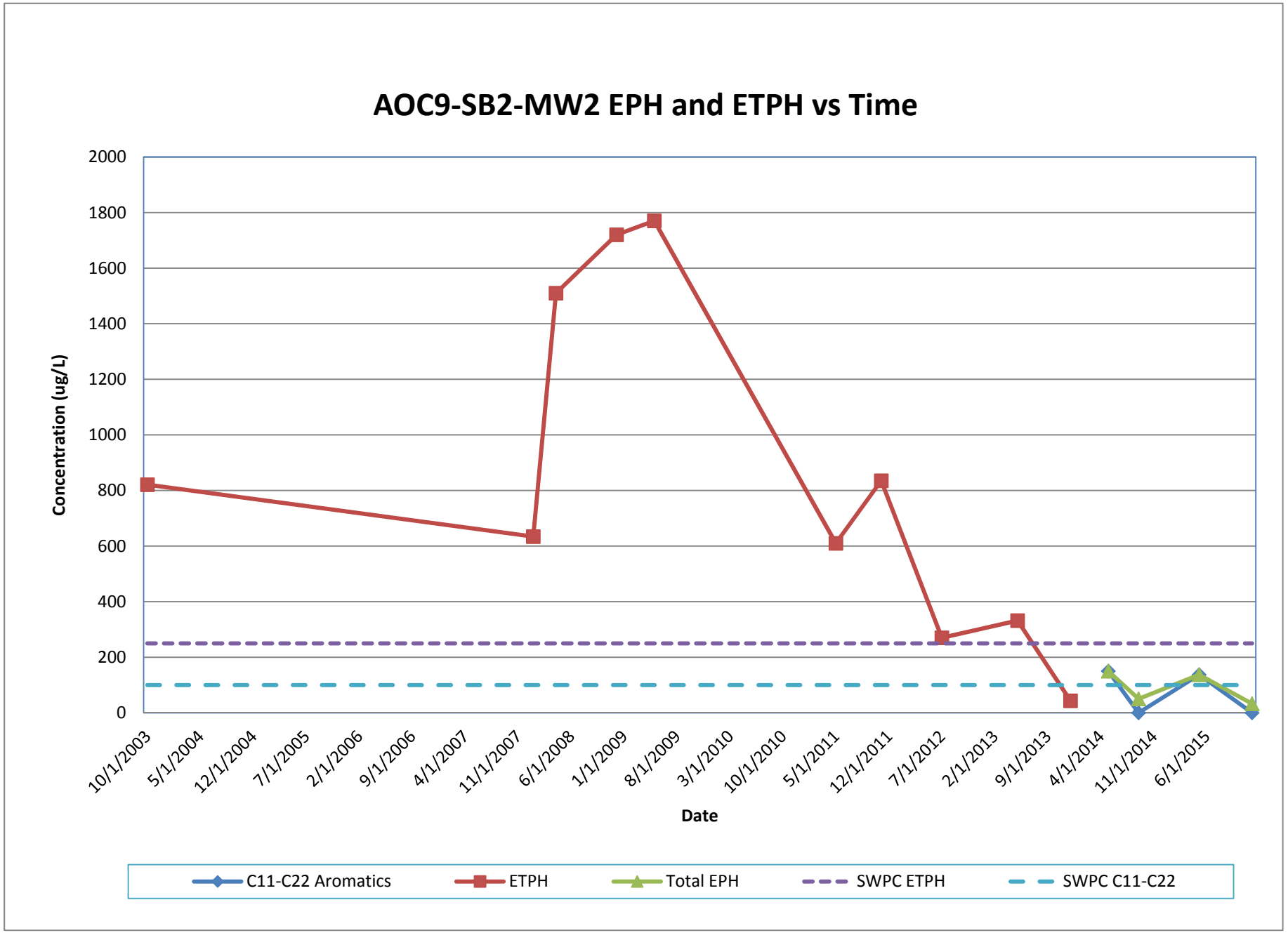
Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

ATTACHMENT 4



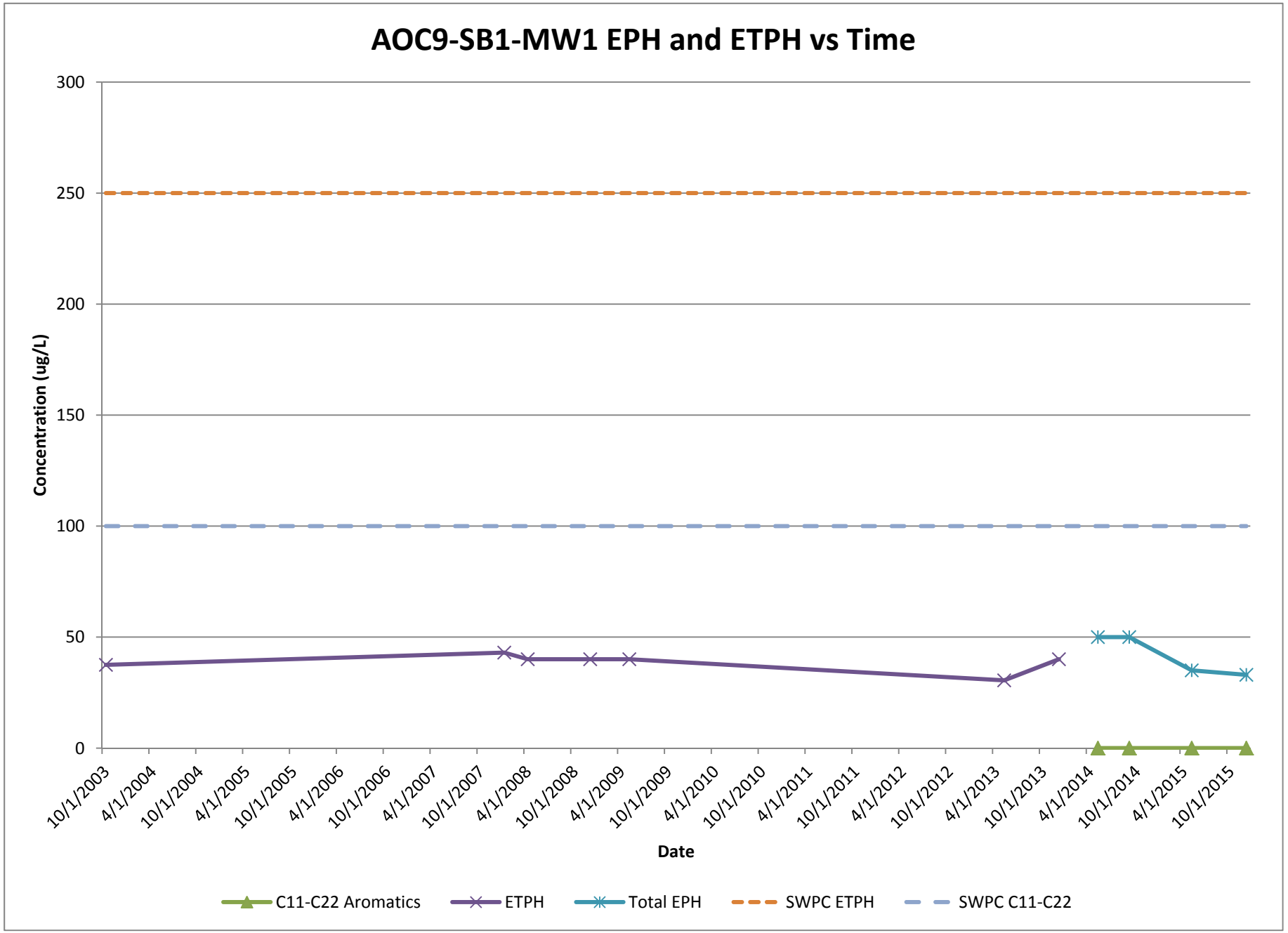
Note: No SWPC for Total EPH

NRG Middletown GW



Note: No SWPC for Total EPH

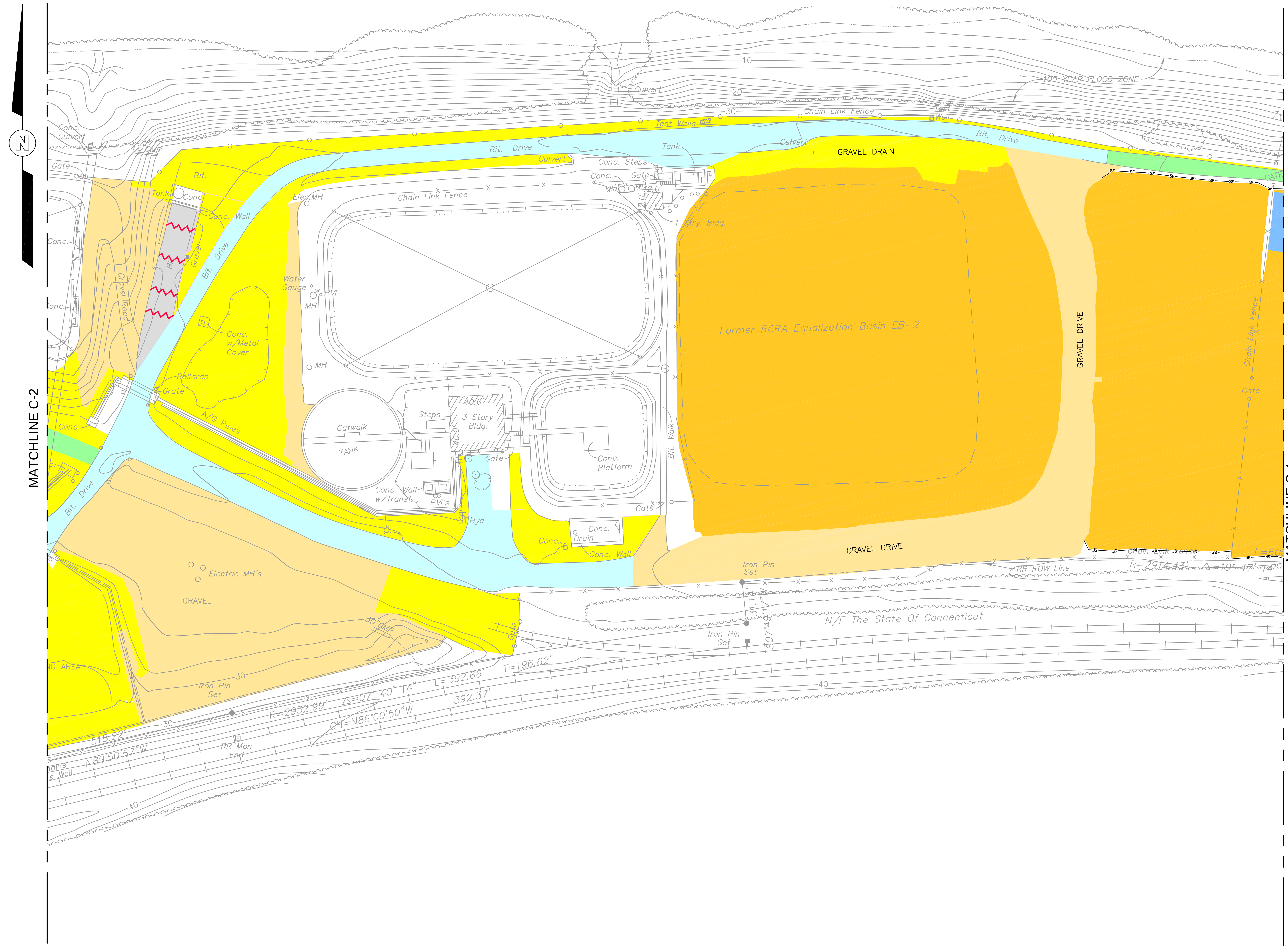
NRG Middletown GW



Note: No SWPC for Total EPH.

All Results were non-detect and 1/2 the detection limit was used for graphing purposes.

ATTACHMENT 5



LEGEND FOR ENGINEERED CONTROLS:

- EXISTING CONTOUR
- 4" CRUSHED STONE
- ASPHALT WITH RUBBER MEMBRANE
- ASPHALT MILLED OR NEW PAVEMENT
- ASPHALT CRACKS SEALED
- EXISTING STONE OF SUFFICIENT THICKNESS
- STONE AREA NEEDING COMPLETION
- PROCESSED STONE DRIVE
- EXISTING ASPHALT PAVEMENT ACCEPTABLE CONDITION
- RAIL ROAD TRACK REMOVAL
- SOIL COVER
- EROSION CONTROL MATTING OVER SOIL COVER
- SILT FENCE

NOTES:

1. SHADED TEXT / LABELS FOR EXISTING SURFACE MATERIALS ARE AS SHOWN ON ORIGINAL BASE MAP AND MAY HAVE BEEN SUPERCEDED BY ENGINEERED CONTROLS SHOWN IN LEGEND.
2. STATUS DURING COVER INSTALLATION IS SHOWN, NOT FINAL.

DRAFT

SCALE: 0 40 80 120 FEET

REV	DESCRIPTION / ISSUE	DATE	APPROVED
0	EC FALL 2013	1/29/14	PF
1	EC STATUS/SITE VISIT	5/6/14	PF
2	SURVEY INFO ADDED	3/31/15	PF
3	AS BUILT PROGRESS	12/3/15	PF

CB&I Environmental & Infrastructure, Inc
150 Royall Street
Canton, MA 02021

DESIGNED BY: P. Farrington
DRAWN BY: G. Jones
CHECKED BY: A. Walker
APPROVED BY:

MIDDLETOWN POWER LLC
MIDDLETOWN, CONNECTICUT

AS-BUILT
ENGINEERED CONTROL
MIDDLETOWN GENERATING STATION
MIDDLETOWN, CONNECTICUT

DATE:	SCALE:	DRAWING NO.	SHEET NO.
1/2/14	AS SHOWN	1009634024–D1	C-3

OFFICE: Pittsburgh, PA
DRAWING NUMBER: 1009634024-D1

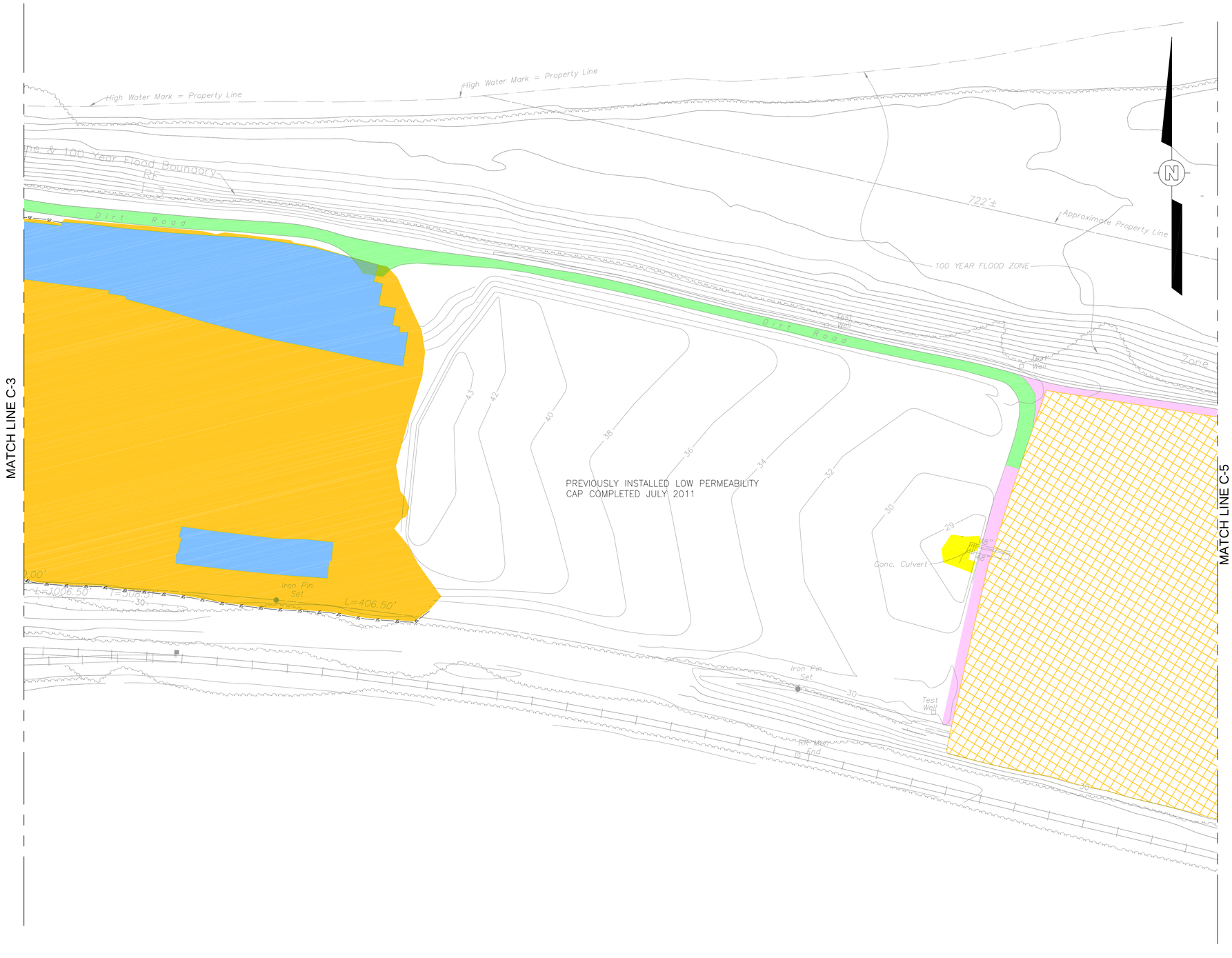
VERIFY SCALE 0 1"

Xref:
Image: CB&I.jpg

File: O:\Shaw Offices – CAD Files\Stoughton, MA\NRG\Middletown\as_built\2work1009634024–D1.dwg
Plot Date/Time: Sep 12, 2016 – 2:29pm
Plotted By: greg.jones

OFFICE
Pittsburgh, PA

DRAWING NUMBER
1009634024-D1



LEGEND FOR ENGINEERED CONTROLS:

- 22 — EXISTING CONTOUR
- 4" CRUSHED STONE
- ASPHALT WITH RUBBER MEMBRANE
- ASPHALT MILLED OR NEW PAVEMENT
- ASPHALT CRACKS SEALED
- EXISTING STONE OF SUFFICIENT THICKNESS
- STONE AREA NEEDING COMPLETION
- PROCESSED STONE DRIVE
- EXISTING ASPHALT PAVEMENT ACCEPTABLE CONDITION
- RAIL ROAD TRACK REMOVAL
- SOIL COVER
- LOW PERMEABILITY CAP REQUIRED
- EROSION CONTROL MATTING OVER SOIL COVER
- SF — SILT FENCE

NOTES:

1. SHADED TEXT / LABELS FOR EXISTING SURFACE MATERIALS ARE AS SHOWN ON ORIGINAL BASE MAP AND MAY HAVE BEEN SUPERCEDED BY ENGINEERED CONTROLS SHOWN IN LEGEND.
2. STATUS DURING COVER INSTALLATION IS SHOWN, NOT FINAL.

DRAFT

SCALE
0 40 80 120 FEET

REV	DESCRIPTION / ISSUE	DATE	APPROVED
0	EC FALL 2013	1/29/14	PF
1	EC STATUS/SITE VISIT	5/6/14	PF
2	SURVEY INFO ADDED	3/31/15	PF
3	AS BUILT PROGRESS	12/3/15	PF

CB&I Environmental & Infrastructure, Inc
150 Royall Street
Canton, MA 02021

DESIGNED BY: *P. Farrington*
DRAWN BY: *G. Jones*
CHECKED BY: *A. Walker*
APPROVED BY:

MIDDLETOWN POWER LLC
MIDDLETOWN, CONNECTICUT

AS-BUILT
ENGINEERED CONTROL
MIDDLETOWN GENERATING STATION
MIDDLETOWN, CONNECTICUT

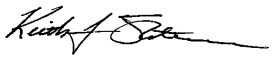
DATE: 1/2/14 | SCALE: AS SHOWN | DRAWING NO. 1009634024-D1 | SHEET NO. C-4

VERIFY SCALE 0 1"

ATTACHMENT 6

Engineered Control Inspection Checklist
Middletown Generating Station
Middletown, CT

Completed by: Keith Shortsleeve
Company: NRG
Date: 11-10-2015

Signature: 

Problem Code

ACE 1 or 2 = Aggregate Cover Erosion, Moderate or Severe
ACSW 1 or 2 = Aggregate Cover Subsurface Washout, Moderate or Severe
SCE 1 or 2 = Soil Cover Erosion, Moderate or Severe
SCSW 1 or 2 = Soil Cover Subsurface Washout, Moderate or Severe
GD 1 or 2 = Vegetation Dead, Moderate or Severe
GE 1 or 2 = Vegetation Erosion, Moderate or Severe
GP = Vegetation Water Ponding Observed
GSF = Vegetation Slope Failure
GSW = Vegetation Subsurface Washout
PDSO = Perimeter Drainage Swale Obstructed
DCO = Drainage Culvert Obstructed
AP C1 = Asphalt Pavement Cracks > 1/2 inch
AP C2 = Asphalt "Potholes"
SF = Slope Failure
O = Other

Remedial Areas (1)	Problem Code	Repair Requirements and Notes (Provide Description)
AOC 1 (Ash Settling Basins)		
Low Permeability Engineered Control		Construction partially complete.
Asphalt Engineered Control		Complete
Aggregate Engineered Control		Construction completed.
Soil Engineered Control		Construction completed in September 2015.
AOC 8 (North & South Fuel Additive Tanks)		
Asphalt Engineered Control		Construction complete.
AOC 13 (Misc. Residual Coal Ash Area Eastern half)		
Aggregate Engineered Control		Construction Complete.
Soil Engineered Control		Construction Complete.
Asphalt Engineered Control		Construction Complete.

Notes:
(1) Use Sheets 1, 2, 3 and 4 of the Engineered Control Drawings for the Inspection Plan.
(2) Document condition of each area identified and repaired during previous inspection.